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# FEDERAL REGISTER

VOLUME 19 NUMBER 139

*Washington, Tuesday, July 20, 1954*


## TITLE 3—THE PRESIDENT

### EXECUTIVE ORDER 10546

SUSPENSION OF CERTAIN PROVISIONS OF THE OFFICER PERSONNEL ACT OF 1947, AS AMENDED, WHICH RELATE TO OFFICERS OF THE MARINE CORPS OF THE GRADES OF FIRST LIEUTENANT AND CAPTAIN

By virtue of the authority vested in me by section 301 of the Officer Personnel Act of 1947, as amended by section 1 (b) of the act of June 30, 1951, 65 Stat. 108, it is ordered as follows:

1. The operation of those provisions of Title III of the Officer Personnel Act of 1947, as amended, which relate to the service-in-grade requirements of officers of the Marine Corps of the grades of first lieutenant and captain for eligibility for consideration for temporary promotion to the next higher grade is hereby suspended until June 30, 1957.

2. This order supersedes Executive Order No. 10465 of June 30, 1953, entitled "Suspension of Certain Provisions of the Officer Personnel Act of 1947, as Amended, Which Relate to Officers of the Marine Corps".

DWIGHT D. EISENHOWER

THE WHITE HOUSE,
*July 16, 1954.*

[F. R. Doc. 54-5586; Filed, July 19, 1954; 10:31 a. m.]

## TITLE 7—AGRICULTURE

### Chapter I—Agricultural Marketing Service (Standards, Inspections, Marketing Practices), Department of Agriculture

PART 51—FRESH FRUITS, VEGETABLES AND OTHER PRODUCTS (INSPECTION, CERTIFICATION AND STANDARDS)

SUBPART—U. S. STANDARDS FOR GRAPEFRUIT (TEXAS AND STATES OTHER THAN FLORIDA, CALIFORNIA AND ARIZONA)[1]

On June 4, 1954, a notice of proposed rule making was published in the FEDERAL REGISTER (19 F. R. 3299) regarding a proposed revision of United States Standards for Grapefruit (Texas and States other than Florida, California and Arizona).

After consideration of all relevant matters presented, including the proposal set forth in the aforesaid notice, the following United States Standards for Grapefruit (Texas and States other than Florida, California and Arizona) are hereby promulgated pursuant to the authority contained in the Agricultural Marketing Act of 1946 (60 Stat. 1087 et seq., 7 U. S. C. 1621 et seq.).

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51.654 Slightly colored.

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[1] Packing of the product in conformity with the requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

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FEDERAL REGISTER

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**CFR SUPPLEMENTS**

**(For use during 1954)**

The following Supplements are now available:

**Title 43 ($1.75)**

**Titles 47–48, Revised 1953 ($7.75)**

Previously announced: Title 3, 1953 Supp. ($1.50); Titles 4–5 ($0.60); Title 6 ($2.00); Title 7: Parts 1–209, Revised 1953 ($7.75); Part 900 to end ($1.25); Title 8 ($0.35); Title 9 ($0.50); Titles 10–13 ($0.50); Title 14: Parts 1–399 ($1.25); Part 400 to end ($0.50); Title 15 ($1.25); Title 16 ($1.00); Title 17 ($0.50); Title 18 ($0.45); Title 20 ($0.70); Title 21 ($1.50); Titles 22–23 ($1.00); Title 24 ($0.75); Title 25 ($0.45); Title 26: Parts 1–79, Revised 1953 ($7.75); Parts 80–169 ($0.50); Parts 170–182 ($0.75); Parts 183–299, Revised 1953 ($5.50); Part 300 to end, and Title 27 ($1.00); Titles 28–29 ($1.25); Titles 30–31 ($1.00); Title 32: Parts 1–699 ($1.75); Part 700 to end ($2.25); Title 33 ($1.25); Titles 35–37 ($0.70); Title 38 ($2.00); Title 39 ($2.00); Titles 40–42 ($0.50); Titles 44–45 ($0.75); Title 46: Parts 1–145 ($0.35); Title 49: Parts 1–70 ($0.60); Parts 71–90 ($0.65); Parts 91–164 ($0.45); Part 165 to end ($0.60); Title 50 ($0.55)

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51.655 Misshapen.
51.656 Slightly spongy.
51.657 Very serious damage.
51.658 Diameter.


AUTHORITY: §§ 51.620 to 51.658 issued under Sec. 205, 60 Stat. 1090, 7 U. S. C. 1624.

GRADES

§ 51.620 *U. S. Fancy.* "U. S. Fancy" consists of grapefruit of similar varietal characteristics which are well colored, firm, well formed, mature, and of smooth texture; free from ammoniation, bird pecks, bruises, buckskin, cuts which are not healed, decay, growth cracks, scab, sprayburn, and free from injury caused by green spots or oil spots, pitting, scale, scars, thorn scratches, and free from damage caused by dirt or other foreign materials, dryness or mushy condition, sprouting, sunburn, disease, insects, or mechanical or other means.

(a) In this grade not more than one-tenth of the surface in the aggregate may be affected with discoloration. (See § 51.630.)

§ 51.621 *U. S. No. 1.* "U. S. No. 1" consists of grapefruit of similar varietal characteristics which are fairly well colored, firm, fairly well formed, mature, and of fairly smooth texture; free from bruises, cuts which are not healed, decay, growth cracks, sprayburn, and free from damage caused by ammoniation, bird pecks, buckskin, dirt or other foreign materials, dryness or mushy condition, green spots or oil spots, pitting, scab, scale, scars, sprouting, sunburn, thorn scratches, disease, insects, or mechanical or other means.

(a) In this grade not more than one-half of the surface in the aggregate may be affected with discoloration. (See § 51.631.)

§ 51.622 *U. S. No. 1 Bright.* The requirements for this grade are the same as for U. S. No. 1 except that no fruit may have more than one-tenth of its surface in the aggregate affected with discoloration. (See § 51.631.)

§ 51.623 *U. S. No. 1 Bronze.* The requirements for this grade are the same as for U. S. No. 1 except that more than 10 percent but not more than 75 percent, by count, of the fruits shall have in excess of one-half of their surface in the aggregate affected with discoloration: *Provided,* That when the predominating discoloration on each of 75 percent or more, by count, of the fruits is caused by rust mite, all fruits may have in excess of one-half of their surface affected with discoloration. (See § 51.632.)

§ 51.624 *U. S. Combination Grade.* Any lot of grapefruit may be designated "U. S. Combination" when not less than 40 percent, by count, of the fruits in each container meet the requirements of U. S. No. 1 grade and the remainder U. S. No. 2 grade. (See § 51.633.)

§ 51.625 *U. S. No. 2.* "U. S. No. 2" consists of grapefruit of similar varietal characteristics which are mature, fairly firm, not more than slightly misshapen or slightly rough, and which are free from bruises, cuts which are not healed, decay, growth cracks, and are free from serious damage caused by ammoniation, bird pecks, buckskin, dirt or other foreign materials, dryness or mushy condition, green spots or oil spots, pitting, scab, scale, scars, sprayburn, sprouting, sunburn, thorn scratches, disease, insects, or mechanical or other means.

(a) Each grapefruit may be only slightly colored.

(b) In this grade not more than two-thirds of the surface, in the aggregate, may be affected with discoloration. (See § 51.634.)

§ 51.626 *U. S. No. 2 Russet.* The requirements for this grade are the same as for U. S. No. 2 except that more than 10 percent, by count, of the fruits shall have in excess of two-thirds of their surface in the aggregate affected with discoloration. (See § 51.635.)

§ 51.627 *U. S. No. 3.* "U. S. No. 3" consists of grapefruit of similar varietal characteristics which are mature, which may be misshapen, slightly spongy, rough but not seriously lumpy for the variety or seriously cracked, which are free from cuts which are not healed, and free from decay, and free from very serious damage caused by bruises, growth cracks, ammoniation, bird pecks, caked melanose, buckskin, dryness or mushy condition, pitting, scab, scale, sprayburn, sprouting, sunburn, thorn punctures, disease, insects, or mechanical or other means.

(a) The fruit may be poorly colored but not more than 25 percent of the surface of each fruit may be of a solid dark green color. (See § 51.636.)

UNCLASSIFIED

§ 51.628 *Unclassified.* "Unclassified" consists of grapefruit which has not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no definite grade has been applied to the lot.

TOLERANCES

§ 51.629 *Tolerances.* In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the tolerances set forth in §§ 51.630 to 51.636 are provided as specified.

§ 51.630 *U. S. Fancy Grade.* Not more than 10 percent, by count, of the fruits in any lot may be below the requirements of this grade, but not more than one-half of this amount, or 5 percent, shall be allowed for very serious damage, and not more than one-twentieth of the tolerance, or one-half of one percent, shall be allowed for decay at shipping point: *Provided,* That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. None of the foregoing tolerances shall apply to wormy fruit.

§ 51.631 *U. S. No. 1 and U. S. No. 1 Bright Grades.* Not more than 10 percent, by count, of the fruits in any lot may be below the requirements of the grade other than for discoloration but not more than one-half of this amount, or 5 percent, shall be allowed for very serious damage, and not more than one-twentieth of the tolerance, or one-half of one percent, shall be allowed for decay at shipping point: *Provided,* That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. In addition, not more than 10 percent, by count, of the fruits in any lot may fail to meet the requirements relating to discoloration. None of the foregoing tolerances shall apply to wormy fruit.

§ 51.632 *U. S. No. 1 Bronze Grade.* Not more than 10 percent, by count, of the fruits in any lot may be below

the requirements of this grade, but not more than one-half of this amount, or 5 percent, shall be allowed for very serious damage, and not more than one-twentieth of the tolerance, or one-half of one percent, shall be allowed for decay at shipping point: *Provided,* That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. No part of any tolerance shall be allowed to reduce or to increase the percentage of fruits having in excess of one-half of their surface in the aggregate affected with discoloration which is required in the grade, but individual containers may vary not more than 10 percent from the percentage required: *Provided,* That the entire lot averages within the percentage specified. None of the foregoing tolerances shall apply to wormy fruit.

§ 51.633 *U. S. Combination Grade.* Not more than 10 percent, by count, of the fruits in any lot may be below the requirements of this grade other than for discoloration but not more than one-half of this amount, or 5 percent, shall be allowed for very serious damage other than that caused by dryness or mushy condition, and not more than one-twentieth of the tolerance, or one-half of one percent, shall be allowed for decay at shipping point: *Provided,* That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. In addition, not more than 10 percent, by count, of the fruits in any lot may have more than the amount of discoloration specified. No part of any tolerance shall be allowed to reduce for the lot as a whole the percentage of U. S. No. 1 required in the combination, but individual containers may have not more than a total of 10 percent less than the percentage of U. S. No. 1 required or specified: *Provided,* That the entire lot averages within the percentage specified. None of the foregoing tolerances shall apply to wormy fruit.

§ 51.634 *U. S. No. 2 Grade.* Not more than 10 percent, by count, of the fruits in any lot may be below the requirements of this grade other than for discoloration but not more than one-half of this amount, or 5 percent, shall be allowed for very serious damage other than that caused by dryness or mushy condition, and not more than one-twentieth of the tolerance, or one-half of one percent, shall be allowed for decay at shipping point: *Provided,* That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. In addition, not more than 10 percent, by count, of the fruits in any lot may fail to meet the requirements relating to discoloration. None of the foregoing tolerances shall apply to wormy fruit.

§ 51.635 *U. S. No. 2 Russet Grade.* Not more than 10 percent, by count, of the fruits in any lot may be below the requirements of this grade but not more than one-half of this amount, or 5 percent, shall be allowed for very serious damage other than that caused by dryness or mushy condition, and not more than one-twentieth of the tolerance, or one-half of one percent, shall be allowed for decay at shipping point: *Provided,* That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. No part of any tolerance shall be allowed to reduce the percentage of fruits having in excess of two-thirds of their surface in the aggregate affected with discoloration which is required in this grade, but individual containers may have not more than 10 percent less than the percentage required: *Provided,* That the entire lot averages within the percentage specified. None of the foregoing tolerances shall apply to wormy fruit.

§ 51.636 *U. S. No. 3 Grade.* Not more than 15 percent, by count, of the fruits in any lot may be below the requirements of this grade but not more than one-third of this amount, or 5 percent, shall be allowed for defects other than dryness or mushy condition, and not more than one-fifth of this amount, or 1 percent, shall be allowed for decay at shipping point: *Provided,* That an additional tolerance of 2 percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination. None of the foregoing tolerances shall apply to wormy fruit.

APPLICATION OF TOLERANCES

§ 51.637 *Application of tolerances.* (a) The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations: *Provided,* That the averages for the entire lot are within the tolerances specified for the grade:

(1) For packages which contain more than 10 pounds, and a tolerance of 10 percent or more is provided, individual packages in any lot shall have not more than one and one-half times the tolerance specified. For packages which contain more than 10 pounds and a tolerance of less than 10 percent is provided, individual packages in any lot shall have not more than double the tolerance specified, except that at least one decayed or very seriously damaged fruit may be permitted in any package.

(2) For packages which contain 10 pounds or less, individual packages in any lot are not restricted as to the percentage of defects: *Provided,* That not more than one grapefruit which is seriously damaged by dryness or mushy condition or very seriously damaged by other means may be permitted in any package, and in addition, en route or at destination, not more than 10 percent of the packages may have more than one decayed fruit.

STANDARD PACK

§ 51.638 *Standard pack.* (a) Fruits shall be fairly uniform in size, unless specified as uniform in size, and when packed in boxes, shall be arranged according to the approved and recognized methods. Each wrapped fruit shall be fairly well wrapped.

(b) All packages shall be tightly packed and well filled but the contents shall not show excessive or unnecessary bruising because of overfilled packages.

(c) When packed in standard nailed boxes, each container shall show a minimum bulge of 2 inches, except that boxes packed with grapefruit of a size 80 or smaller need only show a bulge of 1½ inches.

(d) "Fairly uniform in size" means that for 1⅗ bushel boxes not more than a total of 10 percent, by count, of the fruits in any container is outside the range of diameters given in the following table for various packs:

TABLE I

[Diameter in inches]

| Pack | Minimum | Maximum |
|---|---|---|
| 36's | 5 | 5 9/16 |
| 45's or 46's | 4 13/16 | 5 1/16 |
| 54's or 56's | 4 9/16 | 4 13/16 |
| 64's | 4 3/16 | 4 13/16 |
| 70's or 72's | 3 15/16 | 4 3/16 |
| 80's | 3 13/16 | 4 1/16 |
| 96's | 3 9/16 | 4 1/16 |
| 112's | 3 7/16 | 4 |
| 125's or 126's | 3 5/16 | 3 15/16 |

(e) "Uniform in size" means that for 1⅗ bushel boxes not more than 10 percent, by count, of the fruits in any container vary more than the following amounts:

(1) 64 size and smaller—not more than 9/16 inch in diameter; and,

(2) 54 size and larger—not more than 9/16 inch in diameter.

(f) In order to allow for variations, other than sizing, incident to proper packing, not more than 5 percent of the packages in any lot may fail to meet the requirements of standard pack.

DEFINITIONS

§ 51.639 *Similar varietal characteristics.* "Similar varietal characteristics" means that the fruits in any container are similar in color and shape.

§ 51.640 *Well colored.* "Well colored" means that the fruit is yellow in color with practically no trace of green color.

§ 51.641 *Firm.* "Firm" means that the fruit is not soft, or noticeably wilted or flabby, and the skin is not spongy or puffy.

§ 51.642 *Well formed.* "Well formed" means that the fruit has the shape characteristic of the variety.

§ 51.643 *Smooth texture.* "'Smooth texture" means that the skin is thin and smooth for the variety and size of the fruit.

§ 51.644 *Injury.* "Injury" means any defect which more than slightly affects the appearance, or the edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as injury:

(a) Green spots or oil spots when appreciably affecting the appearance of the individual fruit;

(b) Scale when more than a few adjacent to the "button" at stem end, or when more than 6 scattered on the other portions of the fruit;

(c) Scars which are depressed, not smooth, or which detract from the appearance of the fruit to a greater extent

than the maximum amount of discoloration allowed in the grade; and,

(d) Thorn scratches when the injury is not slight, not well healed, or more unsightly than discoloration allowed in the grade.

§ 51.645 *Discoloration.* "Discoloration" means russeting of a light shade of golden brown caused by rust mite or other means. Lighter shades of discoloration caused by smooth or fairly smooth, superficial scars or other means may be allowed on a greater area, or darker shades may be allowed on a lesser area, provided no discoloration caused by melanose or other means may affect the appearance of the fruit to a greater extent than the shade and amount of discoloration allowed for the grade.

§ 51.646 *Fairly well colored.* "Fairly well colored" means that, except for one inch in the aggregate of green color, the yellow color predominates over the green color on that part of the fruit which is not discolored.

§ 51.647 *Fairly well formed.* "Fairly well formed" means that the fruit may not have the shape characteristic of the variety but is not elongated or pointed or otherwise deformed.

§ 51.648 *Fairly smooth texture.* "Fairly smooth texture" means that the skin is not materially rough or coarse and that the skin is not thick for the variety.

§ 51.649 *Damage.* "Damage" means any defect which materially affects the appearance, or the edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(a) Ammoniation when not occurring as light speck type similar to melanose;

(b) Dryness or mushy condition when affecting all segments more than one-fourth inch at the stem end, or more than the equivalent of this amount, by volume, when occurring in other portions of the fruit;

(c) Green spots or oil spots when the aggregate area exceeds the area of a circle 1 inch in diameter on a grapefruit of 70-size. Smaller sizes shall have lesser areas of green spots or oil spots and larger sizes may have greater areas: *Provided,* That the appearance of the grapefruit is not affected to a greater extent than the area permitted on a 70-size grapefruit;

(d) Scab when it cannot be classed as discoloration, or appreciably affects shape or texture;

(e) Scale when the appearance of the fruit is affected to a greater extent than that of a 70-size grapefruit which has a blotch the area of a circle seven-eighths inch in diameter or a ring 1⅜ inches in diameter;

(f) Scarring which exceeds the following aggregate areas of different types of scars, or a combination of two or more types of scars, the seriousness of which exceeds the maximum allowed for any one type:

(1) Scars when the appearance of the fruit is affected to a greater extent than that of a 70-size grapefruit which has a very deep or very rough scar aggregating the area of a circle one-half inch in diameter;

(2) Scars when the appearance of the fruit is affected to a greater extent than that of a 70-size grapefruit which has a deep or rough scar aggregating 1 inch in diameter;

(3) Scars which are slightly rough or of slight depth and aggregate more than 10 percent of the fruit surface; and,

(4) Scars which are smooth or fairly smooth with no depth and affect the appearance of the grapefruit to a greater extent than the amount of discoloration permitted. (Smooth or fairly smooth scars with no depth shall be scored against the discoloration tolerance);

(g) Sunburn when the area affected exceeds 25 percent of the fruit surface, or when the skin is appreciably flattened, dry, darkened, or hard; and,

(h) Thorn scratches when the injury is not well healed, or concentrated light colored thorn injury which has caused the skin to become hard and the aggregate area exceeds the area of a circle one-fourth inch in diameter, or slight scratches when light colored and concentrated and the aggregate area exceeds the area of a circle 1 inch in diameter, or dark or scattered thorn injury which detracts from the appearance of the fruit to a greater extent than the amounts specified above.

§ 51.650 *Fairly firm.* "Fairly firm" means that the fruit may be slightly soft, but not bruised, and the skin is not spongy or puffy.

§ 51.651 *Slightly misshapen.* "Slightly misshapen" means that the fruit is not of the shape characteristic of the variety but is not appreciably elongated or pointed or otherwise deformed.

§ 51.652 *Slightly rough texture.* "Slightly rough texture" means that the skin is not smooth or fairly smooth but is not excessively rough or excessively thick, or materially ridged, grooved or wrinkled.

§ 51.653 *Serious damage.* "Serious damage" means any defect which seriously affects the appearance, or the edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:

(a) Ammoniation when scars are cracked, or when dark and aggregating more than the area of a circle three-fourths inch in diameter, or when light colored and aggregating more than the area of a circle 1¼ inches in diameter;

(b) Buckskin when aggregating more than 25 percent of the fruit surface or the fruit texture is seriously affected;

(c) Dryness or mushy condition when affecting all segments more than one-half inch at the stem end, or more than the equivalent of this amount, by volume, when occurring in other portions of the fruit;

(d) Green spots or oil spots when the aggregate area exceeds the area of a circle 1½ inches in diameter on a grapefruit of 70-size. Smaller sizes shall have lesser areas of green spots or oil spots, and larger sizes may have greater areas: *Provided,* That the appearance of the grapefruit is not affected to a greater extent than the area permitted on a 70-size grapefruit;

(e) Scab when it cannot be classed as discoloration, or when materially affecting shape or texture;

(f) Scale when the appearance of the fruit is affected to a greater extent than that of a 70-size grapefruit which has a blotch the area of a circle 1⅛ inches in diameter or a ring 1⅝ inches in diameter;

(g) Scarring which exceeds the following aggregate areas of different types of scars, or a combination of two or more types of scars, the seriousness of which exceeds the maximum allowed for any one type:

(1) Scars when the appearance of the fruit is affected to a greater extent than that of a 70-size grapefruit which has a very deep or very rough scar aggregating the area of a circle 1 inch in diameter;

(2) Scars which are deep or rough and aggregate more than 5 percent of the fruit surface;

(3) Scars which are of slight depth or slightly rough and aggregate more than 15 percent of the fruit surface; and,

(4) Scars which are smooth or fairly smooth with no depth and affect the appearance of the grapefruit to a greater extent than the amount of discoloration permitted. (Smooth or fairly smooth scars with no depth shall be scored against the discoloration tolerance);

(h) Sprayburn which seriously affects the appearance of the fruit or is hard, or when more than 1¼ inches in diameter in the aggregate has a light brown discoloration;

(i) Sunburn which affects more than one-third of the fruit surface, or is hard, or the fruit is decidedly one-sided, or when more than 1¼ inches in diameter in the aggregate has a light brown discoloration; and,

(j) Thorn scratches when the injury is not well healed, or concentrated light colored thorn injury which has caused the skin to become hard and the aggregate area exceeds the area of a circle one-half inch in diameter, or slight scratches when light colored and concentrated and the aggregate area exceeds the area of a circle 1½ inches in diameter, or dark or scattered thorn injury which detracts from the appearance of the fruit to a greater extent than the amounts specified as above.

§ 51.654 *Slightly colored.* "Slightly colored" means that except for two inches in the aggregate of green color, the portion of the fruit surface which is not discolored shows some yellow color.

§ 51.655 *Misshapen.* "Misshapen" means that the fruit is decidedly elongated, pointed or flat sided.

§ 51.656 *Slightly spongy.* "Slightly spongy" means that the fruit is puffy or slightly wilted but not flabby.

§ 51.657 *Very serious damage.* "Very serious damage" means any defect which very seriously affects the appearance, or the edible or shipping quality of the

fruit. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as very serious damage:

(a) Growth cracks that are seriously weakened, gummy or not healed;

(b) Ammoniation when aggregating more than the area of a circle 2 inches in diameter, or which has caused serious cracks;

(c) Bird pecks when not healed;

(d) Caked melanose when more than 25 percent in the aggregate of the surface of the fruit is caked;

(e) Buckskin when rough and aggregating more than 50 percent of the surface of the fruit;

(f) Dryness or mushy condition when affecting all segments more than one-half inch at the stem end, or more than the equivalent of this amount, by volume, when occurring in other portions of the fruit;

(g) Scab when aggregating more than 25 percent of the surface of the fruit;

(h) Scale when covering more than 25 percent of the surface of the fruit;

(i) Sprayburn when seriously affecting more than one-third of the fruit surface;

(j) Sunburn when seriously affecting more than one-third of the fruit surface; and,

(k) Thorn punctures when not healed or the fruit is seriously weakened.

§ 51.658 *Diameter.* "Diameter" means the greatest dimension measured at right angles to a line from stem to blossom end of the fruit.

The United States Standards for Grapefruit (Texas and States other than Florida, California and Arizona) contained in this subpart shall become effective 30 days after publication hereof in the FEDERAL REGISTER, and will thereupon supersede the United States Standards for Grapefruit which have been in effect since November 15, 1949 (7 CFR, Part 51; 18 F. R. 7090).

Dated: July 15, 1954.

[SEAL] ROY W. LENNARTSON,
*Deputy Administrator,*
*Agricultural Marketing Service.*

[F. R. Doc. 54-5502; Filed, July 19, 1954; 8:45 a. m.]

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## PART 51—FRESH FRUITS, VEGETABLES AND OTHER PRODUCTS (INSPECTION, CERTIFICATION AND STANDARDS)

### SUBPART—U. S. CONSUMER STANDARDS FOR FRESH TURNIPS[1]

On June 4, 1954, a notice of proposed rule making was published in the FEDERAL REGISTER (19 F. R. 3302) regarding a proposed issuance of United States Consumer Standards for Fresh Turnips.

After consideration of all relevant matters presented, including the proposal set forth in the aforesaid notice, the following United States Consumer Standards for Fresh Turnips are hereby promulgated pursuant to the authority contained in the Agricultural Marketing Act of 1946 (60 Stat. 1087 et seq., 7 U. S. C. 1621 et seq.).

[1] Packing of the product in conformity with the requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

STYLES


Sec.
51.2425 Bunched turnips.
51.2426 Bunched turnips with clipped tops.
51.2427 Topped turnips.

GRADES

51.2428 U. S. Grade A.
51.2429 U. S. Grade B.

OFF-GRADE

51.2430 Off-Grade.

STANDARD BUNCHING

51.2431 Standard bunching.

DEFINITIONS

51.2432 Similar varietal characteristics.
51.2433 Clean.
51.2434 Firm.
51.2435 Smooth.
51.2436 Well formed.
51.2437 Well trimmed.
51.2438 Damage.
51.2439 Fresh.
51.2440 Diameter.
51.2441 Fairly smooth.
51.2442 Fairly well formed.


AUTHORITY: §§ 51.2425 to 51.2442 issued under sec. 205, 60 Stat. 1090, 7 U. S. C. 1624.

STYLES

§ 51.2425 *Bunched turnips.* "Bunched turnips" means turnips with full length tops which are tied in bunches.

§ 51.2426 *Bunched turnips with clipped tops.* "Bunched turnips with clipped tops" means turnips with tops clipped back to not less than 6 inches in length which are tied in bunches.

§ 51.2427 *Topped turnips.* "Topped turnips" means turnips with the tops removed to not more than three-fourths inch in length.

GRADES

§ 51.2428 *U. S. Grade A.* "U. S. Grade A" consists of turnips of similar varietal characteristics the roots of which are clean, firm, smooth, well formed, well trimmed and free from soft rot and free from damage caused by cuts, discoloration, freezing, growth cracks, oil spray, pithiness, woodiness, watercore, dry rot, other disease, insects, or mechanical or other means. Bunched turnips or bunched turnips with clipped tops shall have tops which are fresh and free from decay and free from damage caused by freezing, seedstems, yellowing or other discoloration, disease, insects, or mechanical or other means. Turnips on the shown face shall be reasonably representative in size and quality of the contents of the container.

(a) Unless otherwise specified, the diameter of each turnip root shall be not less than 1¾ inches nor more than 2¾ inches.

(b) Incident to proper grading and handling, the following tolerances shall be permitted:

(1) *For defects of roots.* 5 percent, by count, for turnip roots in any lot which fail to meet the requirements of the grade, including therein not more than 1 percent for soft rot;

(2) *For defects of tops of bunched turnips.* 5 percent, by count, for bunches in any lot which fail to meet the requirements of the grade, including therein not more than 2 percent for decay;

(3) *For off-length tops.* 5 percent, by count, for bunches in any lot which fail to meet the requirements of the style specified in connection with the lot; and,

(4) *For off-size roots.* 5 percent, by count, for turnip roots in any lot which are smaller than the specified minimum diameter, and 10 percent, by count, for turnip roots which are larger than the specified maximum diameter.

§ 51.2429 *U. S. Grade B.* "U. S. Grade B" consists of turnips of similar varietal characteristics the roots of which are clean, firm, fairly smooth, fairly well formed, well trimmed and free from soft rot and free from damage caused by cuts, discoloration, freezing, growth cracks, oil spray, pithiness, woodiness, watercore, dry rot, other disease, insects, or mechanical or other means. Bunched turnips or bunched turnips with clipped tops shall have tops which are fresh and free from decay and free from damage caused by freezing, seedstems, yellowing or other discoloration, disease, insects, or mechanical or other means. Turnips on the shown face shall be reasonably representative in size and quality of the contents of the container.

(a) Unless otherwise specified, the diameter of each turnip root shall be not less than 1¾ inches nor more than 2¾ inches.

(b) Incident to proper grading and handling, the following tolerances shall be permitted:

(1) *For defects of roots.* 10 percent, by count, for turnip roots in any lot which fail to meet the requirements of the grade, including therein not more than 1 percent for soft rot;

(2) *For defects of tops of bunched turnips.* 10 percent, by count, for bunches in any lot which fail to meet the requirements of the grade, including therein not more than 5 percent for decay;

(3) *For off-length tops.* 10 percent, by count, for bunches in any lot which fail to meet the requirements of the style specified in connection with the lot; and,

(4) *For off-size roots.* 5 percent, by count, for turnip roots in any lot which are smaller than the specified minimum diameter, and 10 percent, by count, for turnip roots which are larger than the specified maximum diameter.

OFF-GRADE

§ 51.2430 *Off-Grade.* "Off-Grade" consists of turnips which fail to meet the requirements of either of the foregoing grades.

STANDARD BUNCHING

§ 51.2431 *Standard bunching.* (a) Standard bunches of turnips shall be fairly uniform in size, contain at least 3 turnips and weigh not less than one pound.

(b) Incident to proper bunching, not more than 10 percent, by count, of the bunches in any lot may fail to meet the requirements for "Standard Bunching."

DEFINITIONS

§ 51.2432 *Similar varietal characteristics.* "Similar varietal characteristics"

means that the turnips in any lot are similar in color and shape; for example, yellow-fleshed varieties shall not be mixed with white-fleshed varieties and flat varieties and long varieties shall not be mixed.

§ 51.2433 *Clean.* "Clean" means that the individual turnip is practically free from dirt or other foreign material.

§ 51.2434 *Firm.* "Firm" means that the turnip is not soft, flabby or shriveled.

§ 51.2435 *Smooth.* "Smooth" means that the root is not rough or ridged to the extent that the appearance is materially affected.

§ 51.2436 *Well formed.* "Well formed" means that the root is not misshapen to the extent that the appearance is materially affected.

§ 51.2437 *Well trimmed.* "Well trimmed" means that unattractive secondary rootlets and any objectionably long or coarse taillike part of the root has been cut off.

§ 51.2438 *Damage.* "Damage" means any defect which materially affects the appearance, or the edible or shipping quality of the individual root, or roots in the lot, or causes a loss of more than 3 percent, by weight, in the ordinary preparation for use, or which materially affects the appearance or shipping quality of the tops of bunches in the lot. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(a) Cuts when discolored, rough or deep, or when the appearance is materially affected;

(b) Growth cracks which are not shallow and not smooth or which materially affect the appearance of the turnip;

(c) Pithiness when the edible quality is materially affected by pith;

(d) Insects or insect injury when the appearance or edible quality of the root is materially affected, or when the tops are affected to the extent that the appearance of the bunch is materially affected; and,

(e) Yellowing or other discoloration or injury to the tops when the appearance of the bunch is materially affected. The appearance of the bunch with tops having slight discoloration such as yellowing, browning, or other abnormal color affecting a few leaves shall not be considered materially affected if the tops as a whole show a predominantly normal green color.

§ 51.2439 *Fresh.* "Fresh" means that the tops are of normal green color and not badly wilted.

§ 51.2440 *Diameter.* "Diameter" means the greatest dimension of the root measured at right angles to a line running from the crown to the base of the root.

§ 51.2441 *Fairly smooth.* "Fairly smooth" means that the root is not rough or ridged to the extent that the appearance is seriously affected.

§ 51.2442 *Fairly well formed.* "Fairly well formed" means that the root is not misshapen to the extent that the appearance is seriously affected.

The United States Consumer Standards for Fresh Turnips contained in this subpart shall become effective 30 days after publication hereof in the FEDERAL REGISTER.

Dated: July 15, 1954.

[SEAL] ROY W. LENNARTSON,
*Deputy Administrator,*
*Agricultural Marketing Service.*

[F. R. Doc. 54-5503; Filed, July 19, 1954; 8:45 a. m.]

## Chapter IX—Agricultural Marketing Service (Marketing Agreements and Orders), Department of Agriculture

[Lemon Reg. 545, Amdt. 1]

### PART 953—LEMONS GROWN IN CALIFORNIA AND ARIZONA

LIMITATION OF SHIPMENTS

*Findings.* (1) Pursuant to the marketing agreement, as amended, and Order No. 53, as amended (7 CFR Part 953; 18 F. R. 6767), regulating the handling of lemons grown in the State of California or in the State of Arizona, effective under the applicable provisions of the Agricultural Marketing Agreement Act of 1937, as amended, and upon the basis of the recommendation and information submitted by the Lemon Administrative Committee, established under the said amended marketing agreement and order, and upon other available information, it is hereby found that the limitation of the quantity of such lemons which may be handled, as hereinafter provided, will tend to effectuate the declared policy of the act.

(2) It is hereby further found that it is impracticable and contrary to the public interest to give preliminary notice and engage in public rule making procedure, and postpone the effective date of this amendment until 30 days after publication thereof in the FEDERAL REGISTER (60 Stat. 237; 5 U. S. C. 1001 et seq.) because the time intervening between the date when information upon which this amendment is based became available and the time when this amendment must become effective in order to effectuate the declared policy of the Agricultural Marketing Agreement Act of 1937, as amended, is insufficient, and this amendment relieves restriction on the handling of lemons grown in the State of California or in the State of Arizona.

*Order, as amended.* The provisions in paragraph (b) (1) (ii) of § 953.652 (Lemon Regulation 545, 19 F. R. 4213) are hereby amended to read as follows:

(ii) District 2, 575 carloads.

(Sec. 5, 49 Stat. 753, as amended; 7 U. S. C. 608c)

Done at Washington, D. C., this 15th day of July 1954.

[SEAL] S. R. SMITH,
*Director, Fruit and Vegetable Division, Agricultural Marketing Service.*

[F. R. Doc. 54-5540; Filed, July 19, 1954; 8:52 a. m.]

### PART 958—IRISH POTATOES GROWN IN COLORADO

LIMITATION OF SHIPMENTS

§ 958.316 *Limitation of shipments.* (a) Findings: (1) Pursuant to Marketing Agreement No. 97 and Order No. 58 (7 CFR Part 958), regulating the handling of Irish potatoes grown in the State of Colorado, effective under the applicable provisions of the Agricultural Marketing Agreement Act of 1937, as amended (48 Stat. 31, as amended, 7 U. S. C. 601 et seq.), and upon the basis of the recommendation and information submitted by the area committee for Area No. 1, established pursuant to said marketing agreement and order, and upon other available information, it is hereby found that the limitation of shipments, as hereinafter provided, will tend to effectuate the declared policy of the act.

(2) It is hereby found that it is impracticable and contrary to the public interest to give preliminary notice, engage in public rule making procedure, and postpone the effective date of this section until 30 days after publication in the FEDERAL REGISTER (5 U. S. C. 1001 et seq.) in that (i) the time intervening between the date when information upon which this section is based became available and the time when this section must become effective in order to effectuate the declared policy of the act is insufficient, (ii) more orderly marketing in the public interest, than would otherwise prevail, will be promoted by regulating the shipment of potatoes, in the manner set forth below, on and after the effective date of this section, (iii) compliance with this section will not require any preparation on the part of handlers which cannot be completed by the effective date, (iv) a reasonable time is permitted under the circumstances for such preparation, and (v) information regarding the committee's recommendation has been made available to producers and handlers in the production area.

(b) *Order.* (1) During the period July 19, 1954, through May 31, 1955, inclusive, no handler shall ship:

(i) Any potatoes of the round varieties (including, but not being limited to, Irish Cobblers, Katahdins, Kennebecs, Pontiacs, and Bliss Triumphs) grown in Area No. 1, unless such potatoes grade not less than U. S. No. 1, 2 inches minimum diameter, and are not more than 24 ounces maximum size;

(ii) Any potatoes of the round varieties (including, but not being limited to, Irish Cobblers, Katahdins, Kennebecs, Pontiacs, and Bliss Triumphs) grown in Area No. 1 unless such potatoes grade U. S. No. 2, or better grade up to, but not including, the U. S. No. 1 grade, and are 2 inches minimum diameter; or

(iii) Any potatoes of the long varieties (including, but not being limited to Russet Burbank and White Rose) grown in Area No. 1 unless such potatoes grade not less than U. S. No. 2, 4 ounces minimum size.

(2) During the months of September and October 1954, no handler shall ship potatoes of any variety grown in Area No. 1 unless such potatoes meet the requirements of subparagraph (1) of this paragraph and, in addition, are not more

than "moderately skinned," as such term is defined in the U. S. Standards for Potatoes (§ 51.366 of this title), which means that not more than 10 percent of the potatoes in any lot have more than one-half of the skin missing or feathered.

(3) The U. S. grades and sizes used in this section shall have the same meanings assigned these terms in the U. S. Standards for Potatoes (§§ 51.1540 to 51.1559 of this title) including the tolerances set forth therein; and all other terms shall have the same meaning as when used in the marketing agreement and Order No. 58 (§§ 958.1 to 958.19).

(Sec. 5, 49 Stat. 753, as amended; 7 U. S. C. 608c)

Done at Washington, D. C., this 15th day of July 1954.

[SEAL] S. R. SMITH,
*Director, Fruit and Vegetable Division, Agricultural Marketing Service.*

[F. R. Doc. 54-5542; Filed, July 19, 1954; 8:52 a. m.]

# TITLE 8—ALIENS AND NATIONALITY

## Chapter I—Immigration and Naturalization Service, Department of Justice

PART 6—BOARD OF IMMIGRATION APPEALS: APPEALS; REOPENING AND RECONSIDERATION

PART 242—ALIENS: APPREHENSION, CUSTODY, AND DETERMINATION OF DEPORTABILITY

APPEALS FROM DETERMINATIONS REGARDING BOND, PAROLE, OR DETENTION

The following amendments to Chapter I of Title 8 of the Code of Federal Regulations are prescribed:

1. Paragraph (b) of § 6.1 *Board of Immigration Appeals* is amended by adding subparagraph (7) which, when taken with the introductory material, will read as follows:

(b) *Appellate jurisdiction.* Appeals shall lie to the Board of Immigration Appeals from the following:

* * * * *

(7) Determinations of district directors, deputy district directors, or officers in charge relating to bond, parole, or detention of an alien as provided in § 242.2 of this chapter.

2. Paragraph (a) *Issuance* of § 242.1 *Warrant of arrest* is amended by deleting "district enforcement officers,".

3. Section 242.2 is amended to read as follows:

§ 242.2 *Officers authorized to detain or release aliens from custody; appeals.* District directors, deputy district directors, or officers in charge may exercise the authority contained in section 242 of the Immigration and Nationality Act to continue or detain aliens in, or release them from, custody, and shall promptly notify the alien in writing of any determination made in his case. In any case in which release from custody is denied by any such officers, the Assistant Commissioner, Border Patrol, Detention and Deportation Division, shall be informed promptly of the action taken and the reasons therefor. The alien may appeal to the Board of Immigration Appeals from any determination of such officers relating to his bond, parole, or detention. Such appeal shall be taken by filing a notice of appeal with the district director, deputy district director, or officer in charge within 5 days after the date when written notification of the determination is delivered in person or mailed to the alien. Upon the filing of such a notice of appeal, the district director, deputy district director, or officer in charge shall immediately transmit to the Board of Immigration Appeals all records and information pertaining to his action in relation to such bond, parole, or detention and shall notify the Assistant Commissioner, Border Patrol, Detention and Deportation Division. The filing of such an appeal shall not operate to disturb the custody of the alien or to stay the administrative proceedings or deportation. The foregoing provisions concerning notice, reporting, and appeal shall not apply when the Service notifies the alien that it is ready to execute the order of deportation and takes him into custody for that purpose.

4. Section 242.3 *Release* is amended in the following respects:

a. Paragraph (a) *Prior to final order* is amended by deleting "the district enforcement officer,";

b. Subparagraphs (1), (2) and (3) of paragraph (b) *After final order of deportation; within six months' period* are amended by deleting "district enforcement officer,"; and

c. Paragraph (c) *Release; supervision after six months' period has expired; warning of penal provisions* is amended by deleting "district enforcement officer,".

5. Section 242.21 *Report to district director of continued detention* is amended by deleting ", a district enforcement officer".

(Sec. 103, 66 Stat. 173; 8 U. S. C. 1103)

This order shall become effective on the date of its publication in the FEDERAL REGISTER. Compliance with the provisions of section 4 of the Administrative Procedure Act (60 Stat. 238; 5 U. S. C. 1003) as to notice of proposed rule making and delayed effective date is unnecessary in this instance because the rules prescribed by the order, other than the one that relates to a matter of agency management, relieve restrictions and are clearly advantageous to persons affected thereby.

Dated: July 9, 1954.

HERBERT BROWNELL, Jr.,
*Attorney General.*

Recommended: June 4, 1954.

J. M. SWING,
*Commissioner of Immigration and Naturalization.*

[F. R. Doc. 54-5510; Filed, July 19, 1954; 8:47 a. m.]

# TITLE 19—CUSTOMS DUTIES

## Chapter I—Bureau of Customs, Department of the Treasury

[T. D. 53531]

PART 18—TRANSPORTATION IN BOND AND MERCHANDISE IN TRANSIT

MANIFEST OF IN-BOND SHIPMENTS

JULY 13, 1954.

Manifest, Customs Form 7512, required to be filed in connection with in-bond shipments.

Warehouse withdrawals for transportation and exportation and transportation and exportation entries do not enter the accounts of the comptroller of customs at the port of exportation. (See §§ 18.19 and 18.20, Customs Manual of 1943.) Therefore, in those cases, a manifest on Customs Form 7512 in triplicate only is necessary and § 18.2 (c) of the Customs Regulations is accordingly hereby amended by inserting after the word "quadruplicate" in the first sentence the following: ", except that in the case of warehouse withdrawals for transportation and exportation and transportation and exportation entries it shall be filed in triplicate," and by deleting the word "four" from the first sentence.

(Secs. 551, 624, 46 Stat. 742, as amended, 759; 19 U. S. C. 1551, 1624)

[SEAL] RALPH KELLY,
*Commissioner of Customs.*

Approved: July 12, 1954.

H. CHAPMAN ROSE,
*Acting Secretary of the Treasury.*

[F. R. Doc. 54-5539; Filed, July 19, 1954; 8:52 a. m.]

# TITLE 32—NATIONAL DEFENSE

## Chapter VII—Department of the Air Force

### Subchapter G—Personnel

PART 889—CIVILIAN PERSONNEL SECURITY PROGRAM

CRITERIA FOR APPLICATION OF STANDARD

Paragraph (b) of § 889.6 is changed as follows:

§ 889.6 *Criteria for application of standard.* * * *

(b) In regard to paragraph (a) (5), (9), (10) and (11) of this section, designations of organizations by the Attorney General of the United States are made solely for the purpose of guidance to departments and agencies in the discharge of their obligations under Executive Order 10450 as amended. An employee's membership in, affiliation with, or sympathetic association with any organization, whether specifically designated pursuant to that Executive Order or not, is but one of the factors which will be considered in making the security determination. In evaluating such membership, affiliation, or association, consideration will be given to the employee's statements concerning the reasons and circumstances which led to his joining the organization involved, and

his knowledge of the purposes of the organization.

* * * * *

(AFR 40-12A) (R. S. 161, sec. 202, 61 Stat. 500, as amended; 5 U. S. C. 22, 171a. Interpret or apply sec. 1, 64 Stat. 476, sec. 9A, 53 Stat. 1148; 5 U. S. C. 22-1, 118j; E. O. 10450, Apr. 27, 1953, 18 F. R. 2489; 3 CFR, 1953 Supp.)

[SEAL] K. E. THIEBAUD,
*Colonel, U. S. Air Force,*
*Air Adjutant General.*

[F. R. Doc. 54-5504; Filed, July 19, 1954; 8:45 a. m.]

# TITLE 47—TELECOMMUNICATION

## Chapter I—Federal Communications Commission

[Rules Amdt. 1-64; FCC 54-900]

### PART 1—PRACTICE AND PROCEDURE

### BROADCAST HEARINGS

1. During the past year the Commission has, from time to time, revised its procedural rules in order to effect economies of time and effort in the disposition of hearing cases involving applications for authority to construct broadcasting stations. In the light of our experience during recent months, we believe that additional procedural changes, as set forth below, may now be made consistent with the public interest which will further contribute toward expedition in the handling of hearing matters involving applications for authority to construct new AM, FM, and TV stations.

2. For a clear understanding of the nature and purposes of these revisions, it is necessary to summarize the hearing procedures currently in effect. An application for authorization to construct broadcast facilities together with exhibits attached thereto and such other data which are available, are carefully processed and examined by the Commission. Where the Commission is unable to find that the grant of the application for authority to construct and operate broadcast facilities can be issued without hearing, consistent with applicable statutory and policy requirements, the Commission in accordance with the provisions of section 309 (b) of the Communications Act of 1934, as amended, notifies each applicant of the grounds and reasons for the inability to make such a finding. In each such pre-hearing letter the applicant is also advised that it must file a written statement under oath setting forth in detail certain supplementary information not later than 15 days prior to the scheduled date for hearing. The information requested includes data with respect to (1) background and experience of the applicant, (2) proposed programs, (3) equipment, (4) management, (5) staffing, (6) estimated expenses and (7) such other data as may be specified by the Examiner. If the issues raised by the Commission in its pre-hearing letter are not satisfactorily resolved and in the event that there are two or more mutually exclusive applications for the same broadcasting facility, the applications involved are designated for hearing by formal order of the Commission upon such specific issues that the Commission considers appropriate with respect to an applicant's qualifications; and in the case of mutually exclusive applications, the Commission delineates the areas of comparative consideration comprising (1) background and experience, (2) management and operation, and (3) programming service. These areas are not set out as the issues in the proceeding but, rather, as the areas or framework within which the specific issues will be formulated on the basis of the procedure provided in § 1.841 of our rules. The order designating competing applications for hearing also contains an authorization to the Examiner to add an issue with respect to the adequacy of an applicant's available funds upon appropriate petition and sufficient factual showing.

3. At the pre-designation stage of a hearing proceeding involving mutually exclusive applicants the Commission is faced with two distinct tasks: First, to pass upon the minimum legal, technical and financial qualifications of each applicant on an ex parte and noncomparative basis and to designate in appropriate instances specific issues pertaining to an applicant's qualifications; second, to set forth the general considerations which must be taken into account in evaluating the relative merits of competing applicants for a broadcasting facility with the end in view of determining which applicant would better serve the public interest. Although the Commission's application forms provide the essential data for determining whether an applicant meets the minimum qualifications required of a licensee, it is particularly difficult for the Commission on the basis of such data to delineate with precision the comparative issues between applicants since in the application forms the parties are not required to set forth all matters which may in fact constitute significant differences between the parties. Thus, in its Order of Designation the Commission can only lay down general guideposts for the aid of the Examiner and the parties, marking the general areas of comparison within which a determination of the relative merits of competing applicants can be reached, and leaving the precise significant differences between mutually exclusive applicants to be developed at a time subsequent to the designation for hearing.

4. Under § 1.387 of the rules, where mutually exclusive applications have been designated for hearing, a new application to be given competitive consideration with such other applications must be filed at least 30 days prior to the date of hearing on the previously designated applications. The hearing commences with a hearing conference held under § 1.841 of the rules. At the § 1.841 hearing conference, each applicant is required to come forward with a statement of the substantive matters upon which he relies as a basis for preference. In addition, the parties are required to explore the possibility of agreements to clarify and narrow the issues, admissions of fact and of documents to avoid unnecessary proof, and other related matters. Following this conference, the Examiner issues an order incorporating any agreements reached at the conference and other appropriate matters including the points of reliance on the basis of which the hearing on testimony will be held. Section 1.841 provides that proof at the hearing will be adduced only in respect of the matters relied upon by each of the parties and set forth in the Hearing Examiner's order and that such order will control the subsequent course of the hearing unless modified by the Examiner or by the Commission upon appeal from the Examiner's rulings.

5. In an effort to facilitate hearings on mutually exclusive applications, the Commission has adopted the certain revisions of its procedural rules and policies governing the conduct of comparative hearings in broadcast matters which are fully set forth below. Briefly summarized, these include (1) requirement of a pre-hearing exchange between applicants of their entire direct cases in final written form and a simultaneous submission thereof to the Examiner; (2) expanded use of the pre-hearing conference procedure under § 1.813, and a revision of § 1.841, with respect to the hearing procedure to remove the requirement that applicant submit points of reliance and to make certain other changes; (3) elimination of the requirement in pre-hearing letters that each applicant submit detailed supplementary information prior to the commencement of the hearings; and (4) enlargement of the time interval between designation of an application for hearing and commencement of hearing, and a consistent change in the "cut-off" date for the filing of mutually exclusive applications. The requirement that there be an exchange of detailed supplementary information by each competing applicant prior to commencement of the hearings was instituted as an aid to the parties in the formulation of the points of reliance required under § 1.841. Inasmuch as this latter procedural requirement is being eliminated we do not consider it necessary to continue to require this preliminary exchange of detailed information. The extension of the pre-hearing interval appears necessary to provide applicants with sufficient time to prepare their written cases in advance of the hearing and meet the revised procedural steps provided for in § 1.841 (c).

6. *Commission's Notice of Designation.* The Commission's order designating applications for hearing will remain substantially unchanged. The order will contain findings, where appropriate, with respect to the applicant's legal, technical, and financial qualifications; will set forth the broad areas of comparison as well as any specific non-comparative issues with respect to an applicant's qualifications arising from a review of the application and related documents, and will contain an authorization to the Examiner to enlarge the issues on petition of one of the parties, supported by an adequate factual showing, to include an issue with respect to the sufficiency of an applicant's avail-

able funds to effectuate its program proposals.

7. The only change that has been made in the Commission's policy with respect to designation for hearing concerns the time interval between the date that a matter is designated for hearing and the date for the commencement thereof. As indicated in § 1.387 (a) of the rules, the Commission has followed the policy of setting hearing dates approximately 30 days from the date of designation. Experience has shown, however, that in many instances this period has been insufficient to enable the applicants adequately to prepare their cases and it has frequently been necessary to extend the hearing date. In view of the revision of the procedure, discussed below, to require the submission of the applicants' affirmative cases in writing considerably in advance of the commencement of the hearing, it is evident that the 30-day period would be even more inadequate to allow full preparation. Accordingly, the Commission henceforth will, wherever possible, schedule the hearing on applications approximately 60 days from the date of designation rather than the present 30 days. Consistent with this revision, an application to be considered mutually exclusive with previously filed applications for the same broadcast facility will be required to be filed at least 60 days prior to the date of hearing on such other applications. Sections 1.387 and 1.724 have been revised as set forth below to incorporate these changes.

8. *Exchange of written affirmative cases.* The Commission is of the view that the hearing process would be materially expedited if each applicant were required to exchange with other parties to the proceeding his entire direct case in writing in the form of exhibits under oath prior to the oral portion of the hearing. Such exhibits may include material in the form of testimony of witnesses pertaining to their background, experience, and proposals. We use the term "direct case" in this context to include only the evidence describing the proposal being advanced by applicant. Many of the advantages of an advance exchange of written exhibits were cited in the First Report of the President's Conference on Administrative Procedure published January 26, 1954. In support of the recommendation of the Conference that documentary evidence be submitted in advance of an administrative hearing, the Report stated (pages 28–29):

> The requirement of advance submission of such evidence will, it is believed, encourage to some extent a reduction in the actual quantity of material submitted for the record in the proceeding. However, greater benefits will be realized from the opportunity thus afforded the other parties to examine evidence in advance, to organize their cross examination with respect thereto, and to prepare appropriate rebuttal evidence . . . Parties could, in other words, be required to come to the hearing fully prepared to proceed with the cross examination and the presentation of rebuttal evidence without delay in the taking of evidence.

In addition, such exchange of written material will establish the basic framework of the case in a manner that will avoid the possible competitive disadvantage that might otherwise result to the applicant required to put in his case first in a comparative hearing.

9. For the foregoing reasons, the Commission has concluded that in the interest of expeditious handling of hearing matters the exhibits to be exchanged by each applicant under this revised procedure shall constitute his entire "direct case" as described above. We have previously indicated that the policy requiring a preliminary submission of detailed supplementary material in six categories will no longer be in effect. (We have, however, provided in § 1.841 (e) that subject to ruling of the Examiner an applicant may obtain such information concerning proposals involved in the hearing as may be necessary for him to establish the significant differences between the proposals.) Accordingly, in submitting his direct case each applicant need submit exhibits only with respect to those aspects of its experience, background and proposals which it deems necessary for the establishment of that case. Thus, in preparing its direct case an applicant is in a position to give primary emphasis to what it considers to be the strongest features of its case and is relieved from the obligation of submitting material under virtually every comparative category, which has been incumbent upon applicants under the pre-hearing letter attachment procedure and in connection with the formulation of points of reliance under § 1.841. In making this major procedural change, it is the Commission's hope that henceforce the burden upon applicants as well as the volume of the hearing record will be considerably less than is frequently the case at present. The procedure here adopted is applicable not only to proof with respect to the comparative merits of each applicant's proposals but also to any specific non-comparative qualification issues set forth by the Commission in its Order of Designation.

10. Direct oral testimony at the hearing by an applicant with respect to his affirmative case, i. e., his own proposals, background and experience normally will be limited to (1) such appropriate qualification and explanation as may be necessary of the applicant's exhibits and (2) testimony concerning any portion of the applicant's affirmative case in substitution of exhibits or portions thereof which are rejected by the Examiner on grounds of competency or form rather than for reasons of lack of materiality or relevance. Such substituted oral testimony, however, is to be limited to the scope of the rejected exhibit or portions thereof. It will be noted that in (1) above we have used the word "explanation" rather than "amplification." We have done so to emphasize that the applicant's direct case must be contained in the exchanged exhibits and any oral "explanation" must be consistent with this limitation.

11. *Expansion of use of pre-hearing conference (§ 1.813).* We have expressly provided for pre-hearing conferences both prior to and subsequent to the exchange of exhibits by parties to a hearing. The initial conference will cover matters such as:

(1) Narrowing the issues or the areas of inquiry and proof at the hearing.

(2) Admissions of fact and of documents which will avoid unnecessary proof.

(3) The method of handling reports and letters relating to surveys or contracts.

(4) Assumptions regarding the availability of equipment.

(5) Network programming.

(6) Assumptions regarding the availability of networks proposed.

(7) Offers of letters in general.

(8) The method of handling evidence relating to the past cooperation of existing stations owned and/or operated by the applicants with organizations in the area.

(9) Proof of contracts, agreements, or understandings reduced to writing.

(10) Stipulations.

(11) Need for depositions.

(12) The numbering of exhibits.

(13) The order of offer of proof with relationship to docket number.

(14) Such other matters as will be conducive to an expeditious conduct of the hearing.

Parties are expected, of course, to hold such informal consultation among themselves prior to this conference as may be necessary to make the conference an effective aid to expeditious completion of the hearing. The pre-hearing conference held after the exchange of exhibits will be for the purpose of arriving at such further agreements and understandings as may be possible as an aid to disposition of the hearing. The rule provides, however, that any agreements reached at the § 1.813 conferences will be subject to objection by any party, including counsel for the Broadcast Bureau, not a party to the agreement, and any such agreement must be acceptable to the Examiner who will incorporate such agreements found by him to be acceptable in an order to be issued subsequent to the conclusion of the § 1.841 hearing conference to be held subsequently.

12. Under this revised procedure the hearing will commence with the presentation of applicants' exhibits and related testimony for inclusion in the record. As revised, § 1.841 no longer requires submission by the parties of matters on which they intend to rely at the hearing.

13. Authority for the adoption of the foregoing revisions is contained in sections 4 (i), 4 (j), and 303 (r) of the Communications Act of 1934, as amended.

14. In view of the fact that the amendments adopted herein are procedural in nature, prior publication of notices of proposed rule making under the provisions of section 4 of the Administrative Procedure Act is unnecessary, and the amendments may become effective immediately. Such amendments are to be applicable to any applications designated for hearing subsequent to the date of adoption of these amendments. Moreover, with respect to cases previously designated for hearing, the Hearing Examiner is authorized to order that the balance of the proceeding be conducted under the procedures herein adopted in any instance where a § 1.841 hearing conference has not yet been held or has

not been concluded. We contemplate that in all such cases the Examiner will, upon request of the parties, follow this revised hearing procedure in the absence of a finding by him that to do so would be likely to result in material-delay in completion of the proceeding. We recognize that in these cases in which the Hearing Examiner takes such action, it will be necessary that reasonable continuances be granted to allow the applicants sufficient time for the preparation of their cases in accordance with the revised procedure.

15. *It is ordered,* This 14th day of July 1954, that upon publication in the FEDERAL REGISTER, §§ 1.724, 1.387, 1.813, and 1.841 of the Commission's rules are amended as set forth below.

(Sec. 4, 48 Stat. 1066, as amended; 47 U. S. C. 154. Interpret or apply sec. 303, 48 Stat. 1082, as amended; 47 U. S. C. 303)

Released: July 15, 1954.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] MARY JANE MORRIS,
*Secretary.*

1. Section 1.387 (a) is amended by adding, to the end of the third sentence, "in cases other than those involving broadcast applications and at least 60 days advance notice on comparative hearings involving applications for authority to construct broadcast facilities."

2. Section 1.387 (b) (3) is amended by adding, ": *Provided however,* That in the case of applications for broadcast stations the said period shall be 60 days." to the end of the second sentence; and, "or in the case of broadcast applications after the 60 day period," after the word "period" in the fourth sentence.

3. Section 1.724 is amended by adding, ": *Provided however,* That in the case of applications for broadcast stations the said period shall be 60 days" to the end of the first sentence of paragraph (b).

4. Section 1.813 is amended to read as follows:

§ 1.813 *Pre-hearing conferences.* (a) The Commission or the presiding officer on its or his initiative, or at the request of any party, may direct the parties or their attorneys to appear at a specified time and place for a conference prior to or during the course of a hearing, or to submit suggestions in writing, for the purpose of considering, among other things, the following matters:

(1) The necessity or desirability of simplification, clarification, amplification or limitation of the issues;

(2) The possibility of stipulating with respect to facts;

(3) The procedure at the hearing;

(4) The limitation of the number of witnesses;

(5) The necessity or desirability of prior mutual exchange between or among the parties of prepared testimony and exhibits;

(6) In cases arising under Title II of the act, the necessity or desirability of amending the pleadings and offers of settlement or proposals of adjustment.

(b) An official transcript of the conference shall be made and action taken at or on the basis of the conference, including agreements reached between the parties, shall be incorporated by the Hearing Examiner in an order issued as promptly as may be feasible subsequent to the conclusion of the conference. All agreements will be subject to such ruling as the Examiner may make upon appropriate objection and, to be effective, must be found to be acceptable and approved by the Hearing Examiner.

4. Section 1.841 is amended to read as follows:

§ 1.841 *Exchange of exhibits and information; commencement of hearing procedure in cases involving broadcast applications for authority to construct broadcast facilities.* (a) Each applicant in a hearing upon broadcast applications for authority to construct broadcast facilities shall provide all parties to the hearing with a full set of exhibits to be offered in the hearing as the direct case of the said applicant. Such exchange of exhibits shall be made in accordance with such agreements and rulings as may result from the pre-hearing conference held pursuant to § 1.813, and unless otherwise directed by the Examiner, shall take place at least twenty days in advance of the date for commencement of the hearing. The exhibits required to be exchanged by this paragraph shall comprise the full direct case of the applicant, i. e., all data desired to be submitted by the applicant in connection with his qualifications and proposals.

(b) Oral testimony by an applicant or his witnesses in connection with his direct case will be limited to (1) such appropriate qualification and explanation as may be necessary of the applicant's exhibits and (2) testimony concerning any portion of the applicant's affirmative case in substitution of exhibits or portions thereof which are rejected by the Examiner on grounds of competency or form rather than for reasons of lack of materiality or relevance. Such substituted oral testimony, however, is to be limited to the scope of the rejected exhibit or portions thereof: *Provided, however,* That the provision of this paragraph shall not be construed to preclude or limit normal cross-examination, rebuttal testimony, or the submission of appropriate exhibits in connection therewith.

(c) Except for good cause found in advance by the presiding officer, in all broadcast hearings involving applications for authority to construct broadcast facilities, there shall be held prior to the exchange of exhibits pursuant to this section a pre-hearing conference,[1] in accordance with § 1.813, and a further conference following such exchange of exhibits. Unless otherwise ordered by the Examiner such further conference shall be held at least ten days prior to the date for the commencement of the hearing looking toward agreement on all matters relating to the conduct of the hearing and not already the subject of agreement. At this conference the Examiner and the parties, including Commission counsel, should be prepared to discuss (1) the possibility of agreements disposing of any evidentiary issues raised with respect to the exhibits previously exchanged between the parties; (2) the limitation on cumulative evidence; (3) number of witnesses and estimated length of testimony; (4) need for the use of depositions; and (5) any other matters which may aid the disposition of the hearing.

(d) The Hearing Examiner shall endeavor to issue an order at least five days prior to the date for commencement of hearing which recites the action taken at the further conference; the date for the hearing on the applicants' affirmative cases which, in the absence of special circumstances warranting greater delay, shall not be later than the date for commencement of the hearing specified by the Commission; agreements reached at the conference and any other matters relating to the subsequent course of the hearing. The orders issued by the Examiner as provided for herein shall control the course of the hearing unless modified by the Hearing Examiner for cause during the course of the hearing or by the Commission upon a review of the Hearing Examiner's ruling.

(e) Unless otherwise provided by agreement pursuant to § 1.813 (b), or by order of the Examiner in the light of the circumstances of a particular case, any party to a proceeding involving application for authority to construct broadcast facilities shall be entitled, upon written request therefor, to receive from any other party to the proceeding such detailed information relevant to the proposals of such other party as may reasonably and timely be requested, including information respecting the cost of station construction and operation, and including any material falling within the categories hereinafter specified:

(1) Background and experience.

(2) Integration of ownership and management.

(3) Past operation of broadcast stations.

(4) Programs.

(5) Studies and surveys.

(6) Studio, transmitter, and auxiliary broadcast equipment.

(7) Studio, office, and transmitter building facilities.

(8) Management and staffing plans.

[F. R. Doc. 54-5545; Filed, July 19, 1954; 8:53 a. m.]

[1] Such conferences involving applications for broadcast stations in comparative hearings may include matters such as: (1) Narrowing the issues or the areas of inquiry and proof at the hearing; (2) admissions of fact and of documents which will avoid unnecessary proof; (3) reports and letters relating to surveys or contracts; (4) assumptions regarding the availability of equipment; (5) network programming; (6) assumptions regarding the availability of networks proposed; (7) offers of letters in general; (8) the method of handling evidence relating to the past cooperation of existing stations owned and/or operated by the applicants with organizations in the area; (9) proof of contracts, agreements, or understandings reduced to writing; (10) stipulations; (11) need for depositions; (12) the numbering of exhibits; (13) the order of offer of proof with relationship to docket number; and (14) such other matters as will be conducive to an expeditious conduct of the hearing.

# TITLE 14—CIVIL AVIATION

## Chapter I—Civil Aeronautics Board

### Subchapter A—Civil Air Regulations

[Supplement 24]

### PART 4b—AIRPLANE AIRWORTHINESS: TRANSPORT CATEGORIES

### MISCELLANEOUS AMENDMENTS

This supplement contains the Civil Aeronautics Administration's policies outlining acceptable methods and procedures for showing compliance with the flight requirements of the Civil Air Regulations, Part 4b, Transport Category. This supplement also revises existing policies pertaining to protective breathing equipment requirements in accordance with recent revisions to Part 4b and makes corrections to the existing policies on other oxygen equipment requirements. Other minor amendments have been made.

1. The following sections remain unchanged:

4b.10–2, 19 F. R. 1817, April 2, 1954.
4b.18–1 and 4b.18–2, 17 F. R. 10101, November 7, 1952.
4b.110–1, 19 F. R. 1817, April 2, 1954.
4b.113–1, 19 F. R. 1817, April 2, 1954.
4b.115–2, 19 F. R. 1818, April 2, 1954.
4b.116–1, 19 F. R. 1818, April 2, 1954.
4b.120–1, 19 F. R. 1818, April 2, 1954.
4b.122–1, 19 F. R. 1818, April 2, 1954.
4b.250–1, 16 F. R. 1630, February 16, 1951, and amended by 17 F. R. 10102, November 7, 1952.
4b.337–2, 17 F. R. 2223, March 14, 1952.
4b.358–1, 18 F. R. 5563, November 17, 1953.
4b.401–1, 19 F. R. 1818, April 2, 1954.
4b.484–1, 15 F. R. 8904, December 15, 1950.
4b.651–1, 15 F. R. 8904, December 15, 1950.
4b.632–1, 16 F. R. 3212, April 12, 1951.
4b.651–3, 17 F. R. 11712, December 24, 1952.
4b.651–4, 17 F. R. 11713, December 24, 1952.
4b.651–5, 17 F. R. 11713, December 24, 1952.
4b.651–6, 17 F. R. 11713, December 24, 1952.
4b.651–9, 17 F. R. 11713, December 24, 1952.
4b.651–11, 17 F. R. 11714, December 24, 1952.
4b.651–12, 17 F. R. 11714, December 24, 1952.
4b.700–1, 19 F. R. 1818, April 2, 1954.

2. The following sections are rescinded: 4b.10–1, 4b.380–2, 4b.450–1, 4b.470–1, 4b.474–1, 4b.730–1, 4b.740–2.

3. The following sections are revised or added: 4b.16–1 (Added), 4b.16–2 (Added), 4b.16–3 (Added), 4b.100–1 (Added), 4b.100–2 (Added), 4b.100–3 (Added), 4b.105–1 (Added), 4b.111–1 (Added), 4b.112–1 (Added), 4b.113–2 (Added), 4b.114–1 (Added), 4b.115–1 (Revised), 4b.116–2 (Added), 4b.118–1 (Added), 4b.119–1 (Added), 4b.120–2 (Added), 4b.121–1 (Added), 4b.122–2 (Added), 4b.123–1 (Revised), 4b.123–2 (Added), 4b.124–1 (Added), 4b.125–1 (Added), 4b.130–1 (Added), 4b.131–1 (Added), 4b.132–1 (Added), 4b.133–1 (Added), 4b.140–1 (Added), 4b.141–1 (Added), 4b.142–1 (Added), 4b.143–1 (Added), 4b.144–1 (Added), 4b.150–1 (Added), 4b.151–1 (Added), 4b.152–1 (Added), 4b.153–1 (Added), 4b.154–1 (Added), 4b.155–1 (Added), 4b.156–1 (Added), 4b.157–1 (Added), 4b.158–1 (Added), 4b.160–1 (Added), 4b.161–1 (Added), 4b.162–1 (Added), 4b.170–1 (Revised), 4b.171–1 (Revised), 4b.172–1 (Revised), 4b.173–1 (Revised), 4b.180–1 (Added), 4b.181–1 (Added), 4b.182–1 (Revised), 4b.190–1 (Added), 4b.324–1 (Added), 4b.334–1 (Added), 4b.337–1 (Revised), 4b.337–3 (Added), 4b.350–1 (Added), 4b.351–1 (Revised), 4b.353–1 (Added), 4b.371–1 (Added), 4b.372–1 (Revised), 4b.380–1 (Revised), 4b.384–1 (Revised), 4b.400–1 (Revised) 4b.401–2 (Added), 4b.406–1 (Added), 4b.416–1 (Added), 4b.416–2 (Added), 4b.417–1 (Added), 4b.418–1 (Added), 4b.426–1 (Added), 4b.430–1 (Added), 4b.437–1 (Added), 4b.440–1 (Added), 4b.449–1 (Added), 4b.452–1 (Added), 4b.453–1 (Added), 4b.454–1 (Added), 4b.461–1 (Added), 4b.465–1 (Added), 4b.467–1 (Added), 4b.467–2 (Added), 4b.611–1 (Added), 4b.612–1 (Revised), 4b.612–2 (Added), 4b.612–3 (Added), 4b.642–1 (Added), 4b.651–2 (Revised), 4b.651–7 (Revised), 4b.651–8 (Revised), 4b.651–10 (Revised).

4. Section 4b.740–1, as published in 16 F. R. 1052, February 6, 1951, is amended as follows:

a. In the second and third paragraphs delete "§§ 41.27, 42.70, and 61.213" and substitute "Parts 40, 41, and 42".

b. Paragraph (c) is amended by deleting the reference to Part 61.

c. In paragraph (c) (2) (i) delete "TIAS" wherever it appears and substitute "CAS".

d. In paragraph (d) delete "§ 61.213" and substitute "Part 40".

e. In paragraph (d) (1) (ii) (*c*) delete "TIAS" and substitute "CAS".

f. In paragraph (d) (2) (v) delete "§ 61.213" and substitute "Part 40".

g. In paragraph (d) (2) (ix) delete "§ 61.213" wherever it appears and substitute "Part 40".

h. In paragraph (d) (2) (xi) (*f*) change the reference "§ 4b.119 (b)" to "§ 4b.119 (a)".

i. In paragraph (d) (2) (xi) (*i*) change the reference "§ 4b.119 (c)" to "§ 4b.119 (b)".

(Sec. 205, 52 Stat. 984, as amended; 49 U. S. C. 425. Interpret or apply secs. 601, 603, 52 Stat. 1007, 1009, as amended; 49 U. S. C. 551, 553)

This supplement shall become effective September 1, 1954.

[SEAL] F. B. LEE,
*Administrator of Civil Aeronautics.*

§ 4b.16–1 *Applicant's flight test report (CAA policies which apply to § 4b.16)*. The applicant should submit a report signed by his test pilot containing the results of flight tests which were conducted by him. It should certify that the airplane has been flown at least in all maneuvers necessary for proof of compliance with the flight requirements and it is his belief that the airplane will conform therewith. In the case of very large airplanes, this procedure may be modified as deemed necessary by the Administrator.

§ 4b.16–2 *Pre-flight test planning (CAA policies which apply to § 4b.16 (a))*—(a) *Proposed official flight test program.* Before the airplane is presented for official type certification tests, the applicant should submit to the CAA a proposed flight test program which will indicate at least the following:

(1) The area, defined by the several selections described in § 4b.100–2 which is to be covered by the terms of the type certification.

(2) All proposed tests; the order in which they are to be conducted; the purpose of each test; and for each the airplane weight, C. G. position, flap setting, power to be drawn, and, where appropriate, the altitude, the trim speed(s) and the speed(s) or speed range to be investigated. Appendix A[1] presents a list of most of the flight and operation tests generally required for the type certification program together with information relative to the airplane configuration, test procedure, and special instrumentation for each test.

(3) Since most transport airplanes undergo many changes during their life span it is well to consider this fact in setting up a flight test program. Such changes as installation of different propellers, higher powered engines, etc., can often be predicted in advance.

(4) It is often desirable to simulate operation with higher power for the determination of flying qualities and other tests, thus simplifying the problem of approving the airplane when the power change becomes effective. Data of this nature obtained during CAA flight tests may often reduce further testing during the life of the airplane.

(5) When an airplane has been type certificated in the transport category and a change is made affecting performance and/or flying qualities, the following procedure is suggested:

(i) The effect of the change on each of the flight tests in the general flight program should be noted.

(ii) Those tests which are materially influenced by the change should be listed.

(iii) A test program should be prepared embodying such of these tests as are felt to be critical or representative. This program should be forwarded to the CAA with the reasons for selecting the pertinent items. Appendix B[1] shows representative flight programs for various types of changes and may be helpful in the preparation of the programs.

(iv) A description should be submitted of the method(s) which the applicant proposes to use in order to reduce the observed data to standard conditions.

(v) A statement should be submitted of any intention on the part of the applicant to resort to calculation in lieu of, or for the purpose of generalizing test data, together with a description of the data upon which these calculations are to be based and the methods to be used therein.

(6) Since it will require time for the CAA to determine the adequacy of this entire program, it is strongly recommended that it be submitted as early as practicable, otherwise the commencement of the testing may be delayed.

(b) *Order of testing.* The Civil Air Regulations are so worded that the results of some flight tests have a definite bearing on the conduct of other tests. For this reason careful attention should be given to the order of testing. The

[1] Not submitted for publication in the FEDERAL REGISTER.

exact order of testing will be determined only by considering the particular airplane and test program involved. Appendix C [1] shows a general arrangement that may be of assistance to those applicants who are not familiar with the CAA flight test procedures. Tests which are particularly important in the early stages of the program are:

(1) *Air-speed calibration.* All tests involving air speed depend upon the calibration.

(2) *Stall speed measurement.* Most of the performance tests and flying qualities are related to the stall speed.

(3) *Minimum control speed for take-off.* The take-off safety speed depends upon this item.

(4) *Engine cooling.* All en route climb speeds and cowl flap settings are related to this test.

(c) *Test groupings*—(1) *Weight and C. G.* In addition to the regulatory relation of one test to another, efficient testing requires that consideration be given to the accomplishment of as many tests on a single flight as can be accommodated successfully. The tests shown in Appendix D [1] have been grouped under various weight and center of gravity conditions in order to facilitate the development of a flight test program.

(2) *Special instrumentation.* Similarly, consideration should be given to grouping of tests that involve special instrumentation. Examples of these are take-off and landing tests which usually require ground equipment to record horizontal distance, height, and time. Ground calibration of the air-speed indicating system can be accomplished at the same time. The CAA possesses certain instruments which may be used for obtaining test data, such as trailing air-speed bombs, sensitive altimeters, stop watches, carbon monoxide indicators, etc., as well as photographic equipment for measuring take-off and flight landing paths. It is therefore recommended that the matter of instrumentation be discussed with the CAA before any decision is made with regard to the detailed flight test program. A list containing those tests requiring special instrumentation is shown in Appendix E.[1]

(3) *Data reduction.* If the overall elapsed time for the certification program is to be kept to a minimum, tests requiring considerable data reduction should be conducted as early in the program as possible. Most performance data, particularly landing and take-off data, fall in this category.

§ 4b.16–3 *Additional flight tests. (CAA policies which apply to § 4b.16 (b))*—(a) *General.* (1) Routine CAR tests as prescribed in § 4b.100 through § 4b.743 will be conducted (in accordance with existing procedures) to determine performance, flying qualities, power plant characteristics, etc.

(2) The official functional and reliability tests will be that portion of the tests conducted under the immediate supervision of the Type Certification Board,[2] as prescribed in (c) through (h) of this section to show compliance with §§ 4b.100 through 4b.743.

(3) Supplementary experience consisting of other flight tests and experience with an airplane (of the same) type will be taken into consideration in establishing the extent of the official portions of the tests. This supplementary experience may be obtained by the manufacturer, military services, airlines, etc.

(4) Simulated tests consisting of tests on the ground or in an airplane of (like) components and equipment under conditions simulating those likely to be obtained in service will also be taken into consideration in establishing the extent of the official portion of the tests.

(b) *Functional and reliability tests.* In order to satisfactorily accomplish the objectives of § 4b.16 (b) concerning additional flight tests and the extent thereof, the Administrator deems it necessary that:

(1) A comprehensive and systematic check be made in flight of the operation of all components to determine whether they "function properly," i. e., perform their intended function without introducing safety hazards.

(2) Sufficient testing and supplementary experience under actual, or a combination of simulated and actual experience, be obtained and evaluated to give reasonable assurance that the airplane is "reliable," i. e., should continue to function properly in service. (In order to obtain wider experience, manufacturers are encouraged to cooperate with airlines or other responsible operators in operating experimental airplanes of the same type under service conditions.)

(3) Appropriate corrective action be taken when the need therefor is determined under (b) (1) and (b) (2) of this section. (The CAA is concerned only to the extent that the airplane can be operated safely under suitable inspection and maintenance procedures, but is not concerned with maintenance costs.)

(c) *Test program.* The Type Certification Board for each project will decide upon a proposed official test program at the time of the pre-flight meeting of the Board (prior to the routine CAR flight tests) and coordinate this with the airplane manufacturer. At the conclusion of the routine type tests, the T. C. Board will meet again to review the experience gained in those tests, changes made in the design, and any additional supplementary experience, and to revise the proposed test program accordingly.

(d) *Planning and execution of test program.* The following points should be considered:

(1) The test program should be sufficiently well planned to enable its execution in an efficient manner without overlooking important items. It is not intended that the "paper work" be overemphasized to the detriment of the practical results, and it should be reduced to a minimum for small simple airplanes. The T. C. Board will review the design features and equipment with respect to the general objectives, and prepare a list showing:

(i) Components and systems to be checked in (d) (4) of this section,

(ii) A brief description of the operations to be performed, where these are not obvious (referencing any necessary operating instructions),

(iii) Special checks or likely critical conditions,

(iv) Estimated flight time required.

(2) Allowance may be made for the functional tests already required by the routine type tests. Allowance may also be made for simulated testing of new features and equipment; however, the flight test program should be planned to determine the adequacy of the simulated tests (e. g., to determine whether the actual environmental conditions of temperature,[3] vibration, etc., are covered by the simulated tests) when these may be critical, and to determine whether the installation and connected systems are satisfactory. The T. C. Board will then make a consolidated estimate of the total flight time required, allowing for overlapping, and adjust this in accordance with the "Test time" outlined in (e) of this section.

(3) The program will be arranged to permit the Flight Test Agent in charge to become thoroughly familiar with the flying qualities of the airplane, particularly those not specifically covered in the routine type tests.

(4) All components of the airplane should be intensively operated and studied under all operating conditions expected in service and obtainable within the time and geographic limitations of the tests. Intensive operation means repeated operation of components in various sequences and combinations likely to occur in service. Particular attention should be given to potential sources of crew error, overtaxing of crew ability and the emergency procedures that would be required in the event of malfunction of any component. This intensive type of testing should be conducted in all cases, but the length of time for which it is continued will depend upon the simulated and supplementary experience available for the particular type, as outlined in "Test time" in (e) of this section.

(5) Ground inspections should be made at appropriate intervals during the test program to determine whether there are any failures or incipient failures in any of the components which might be a hazard to safe flight.

(6) When design changes are made during the course of the test, or when the official test airplane differs from those on which supplementary experience is obtained, or from modified versions of the same basic airplane type, the revised or modified items should be rechecked in accordance with the above procedure, but every effort should be made to include such items in the pro-

[1] Not submitted for publication in the FEDERAL REGISTER.

[2] A Type Certification Board is set up by the CAA field offices on each new type aircraft project.

[3] This does not imply that flight tests must be conducted under the most severe outside air temperatures likely to be encountered in service. It should normally be possible to determine the effects of extreme outside temperatures on local temperatures by extrapolation or by suitable correction factors.

gram in such a way as to avoid unduly extending the overall test time. To this end, the Administrator may accept, in lieu of additional flight tests:

(i) Special tests of the original and revised components in which the conditions causing failure are intensified and

(ii) Simulated tests of differing components.

(e) *Test time.* It is highly desirable that functioning and reliability test programs be administered uniformly so that the program and flight time for a given project would be approximately the same regardless of which T. C. Board administered the project. This is difficult to achieve without establishing fixed arbitrary test times which would obviously be contrary to the intent of § 4b.16 (b). The following procedure which permits considerable flexibility is, therefore, established for the guidance of T. C. Boards.

(1) When supplementary experience is not taken into account and the airplane is conventional in regard to complexity and design features, the functioning and reliability test programs should be 150 hours. This time may be reduced to allow for simulated testing (see (d) (2) of this section), and for supplementary experience (see (2) of this paragraph). However, it may be necessary to increase the 150 hours, if difficulties are encountered in earlier flights, or for radically new design features or in extreme cases of complexity. An example of extreme complexity would be an airplane intended for operation at 40,000 ft. altitude, with automatic dive recovery flaps, turbos, variable jet exhaust, two speed cooling fans, retractable wind screens, automatic control of engine cooling, turbos, intercoolers, jet exhausts, etc. The test program for such an airplane might require as much as 300 hours if no supplementary experience were available.

(2) When satisfactory supplementary experience is available and taken into account, the following allowances should be used as a guide and applied with judgment in reducing the official flight test time. However, in any case, the official program should provide sufficient time to accomplish the objective of (b) (1) of this section in accordance with the items listed in (d) (3) and (d) (4) of this section.

(i) *For intensive experience.* When the allowance is based on the total time of any one airplane in airline crew training and similar intensive operations, two hours of such operation may be considered equivalent to one hour of official testing.

(ii) *For miscellaneous experience.* When the allowance is based on the total time of any one airplane, five hours of such experience may be considered equivalent to one hour of official testing.

(iii) *Reduction for supplementary experience.* Whenever a reduction of official test time is desired on the basis of supplementary experience, such experience should be adequately recorded and submitted to the T. C. Board as described in (f) of this section.

(f) *Reports and records.* (1) A log should be kept of all flight tests, and accurate and complete records kept of the inspections made and of all defects, difficulties, and unusual characteristics and sources of crew error discovered during the tests, and of the recommendations made and action taken. Items for which design changes may be required will be reported to the manufacturer and the appropriate CAA engineering division.

(2) If supplementary experience is to be taken into account, similar records of such experience should be kept and submitted to the T. C. Board, together with a list of the differences between the airplane on which the experience was obtained and the official test airplane. When supplementary experience is obtained on a large fleet of airplanes (for example, military operations) of the same or a comparable type (see (d) (6) of this section), these records may consist of statistical summaries in lieu of complete records for each individual airplane.

(3) At the conclusion of the official tests, a summary report should be prepared by the T. C. Board and forwarded to Washington for inclusion in the Type Inspection Report.

(g) *Administration.* The CAA Flight Test Agent in charge will act as coordinator of all flight activities of the T. C. Board during the official program and the agent or an alternate designated by him will participate in all flights. He will collaborate with the manufacturers' pilots in all these activities, particularly in regard to flight plans and procedures. The manufacturers' pilot should be in command of all flights, but CAA pilots will fly the airplane at least sufficiently to accomplish item (d) (3) of this section.

(1) Other CAA personnel (e. g., representatives of other divisions and specialists) will participate in the flight tests when deemed necessary by the T. C. Board to accomplish the purposes of the tests.

(2) When supplementary experience is obtained in airline operations, a CAA Aviation Safety Agent will be assigned to follow the operations, review the operator's records, and supplement these by reports to the T. C. Board.

(h) *Test airplane.* To facilitate completion of the type certification procedure one airplane may be used for the official functioning and reliability tests while another airplane (or airplanes) is used for the routine type tests. In this case the test time on at least one airplane should be sufficient to accomplish the objective of (b) (2) of this section.

(i) *Modified types.* The procedure outlined in (h) of this section applies to new type designs. When a design employs components identical to those used in previous designs, credit may be given for the supplementary experience available for such components. When a design is modified (for example, several versions of the same basic type with different engines, propellers, etc.), the modified features and components should be treated in accordance with (d) (6) of this section.

§ 4b.100–1 *Procedure for demonstrating compliance with the flight requirements (CAA policies which apply to § 4b.100 (a))*—(a) *Responsibility.* The burden of showing or implementing compliance with the requirements for an airworthiness or a type certificate rests with the applicant. The applicant should at his own expense and risk, conduct such official flight tests as determined by the CAA to demonstrate compliance with the minimum requirements. During the type inspection the applicant should make available the airplane for that purpose as well as all of the personnel and equipment necessary to obtain the required data.

(b) *Tolerances permitted for flight tests*—(1) *General.* The tolerances in (b) (2) of this section are the allowable deviation from specified flight conditions for a particular test. They are not allowable tolerances on specific requirements, nor are they to be considered as allowable inaccuracy of measurement or of the method of determination. As an example, when demonstrating stability with specified trim speed of 1.4 $V_{s_1}$, the trim speed may be 1.4 $V_{s_1}$ ±3 mph or 3 percent; however, no positive tolerance is permitted when demonstrating the minimum prescribed trim speed of 1.4 $V_{s_1}$.

(i) Where the variation in the parameter on which a tolerance is allowed will have an appreciable effect on the test, the results should be corrected to the standard value of the parameter; otherwise, no correction is necessary. The applicant may adhere to closer tolerances if he so desires.

(ii) The following list indicates the cases in which correction for tolerances should be made:

| Test | Weight | C. G. | Air speed | Power | Wind |
|---|---|---|---|---|---|
| Air speed calibration | — | — | — | — | — |
| Stall speeds | X | — | — | — | — |
| All climbs | X | — | — | X | — |
| Landings | X | — | X | — | X |
| Take-off | X | — | X | X | X |
| Accelerate | X | — | X | X | X |
| Decelerate | X | — | X | — | X |
| Stability and control | — | — | — | — | — |
| Minimum control speed | — | — | — | X | — |

(2) *Individual tolerances.* The following are general tolerances from specified values permitted during CAA testing. These tolerances apply unless, for a particular test, other tolerances are set forth in the testing procedure. These tolerances are plus or minus variations unless otherwise noted in the particular test:

| Item: | Tolerance |
|---|---|
| Weight | +5 percent, −10 percent. |
| Critical items affected by weight | +5 percent, −1 percent. |
| C. G. | 7 percent total travel. |
| Air speed | 3 m. p. h. or ±3 percent whichever is greater. |
| Power | 5 percent. |
| Wind (take-off and landing tests) | As low as possible but not to exceed approximately 12 percent $V_{s_1}$ or 12 m. p. h., whichever is lower, along the runway—measured at a height of 6 feet above the runway surface. |

(c) *Type Inspection Report.* (1) All information and data obtained as a result of the type inspection investigation and tests should be reported in Form ACA 283–4b, Type Inspection Report.

(2) Upon completion of the type inspection, the applicant should prepare the information necessary to show compliance with the requirements. This material together with the Airplane Flight Manual required by § 4b.740 should be completed as promptly as possible and forwarded to the CAA.

§ 4b.100–2 *Selection of weight, altitudes, speeds and wing flap positions (CAA policies which apply to § 4b.100 (b)).* Before starting official flight tests, certain data should be obtained by the applicant in order that the options prescribed in (a) through (e) of this section can be executed:

(a) *The selection of the range of weight and altitude to be covered by the flight testing required for certification.* This selection should be based upon the extent to which the applicant for certification is concerned with the operating limitations which will be imposed upon the airplane. If the applicant is not concerned with this point, he may elect to conduct only the flight tests required to demonstrate compliance with the minimum performance requirements contained in § 4b.110 together with those required to demonstrate compliance with the flying qualities and other requirements specified in §§ 4b.130 through 4b.190. If it is practicable to limit the operation of the airplane by a scheduled air carrier to sea level airports containing runways of ample length and to terrain altitude not in excess of 4,000 feet, this procedure appears satisfactory. It should be noted that this case could apply to a seaplane in scheduled operation. If the applicant wishes to provide for the greatest possible flexibility in the matter of compliance with the operating limitations contained in § 40.70 of this subchapter, considerably more performance tests will be necessary. It may be entirely practicable, for example, for operation over routes involving appreciable differences in the altitude of airports, to take advantage of the improvement in performance which is possible by means of reducing the weight at which the airplane is operated. It may also be desirable to alter the various flap settings in order to improve the climbing performance at a given weight. In cases such as these, it will be necessary to determine by flight testing and calculation, the effect of weight, altitude, and flap setting, throughout the range of each for which it is desired to provide, upon the take-off, landing, and climbing performance and to include this information in the CAA Approved Airplane Flight Manual. This selection will be left to the applicant since, even though he may find it difficult to anticipate the uses to which the airplane may subsequently be put, he is nevertheless in better position to forecast this than anyone else.

(b) *The selection of the weight range to be covered by the terms of the certification.* This selection is closely related to (a) of this section and should be based upon essentially the same considerations. The simplest possible selection of weights is a single maximum weight to be used both for take-off and landing and as a basis for the operating limitations. The next simplest choice would appear to be a maximum take-off weight and a maximum landing weight differing from take-off weight. This choice requires the installation of fuel jettisoning equipment (when the take-off weight exceeds the landing weight by more than 5%) of sufficient capacity to reduce the weight of the airplane from the maximum take-off weight to the maximum landing weight in compliance with § 4b.437. The operating limitations may then be based upon the assumption that these two weights exist throughout each flight. The most flexible possible arrangement in the matter of weights is provided by selecting a range of weights for take-off and a range for landing, and determining the performance as functions of these weights so that, in showing compliance with the operating limitations, any weight within these ranges may be selected to fit the requirements of a particular route. This selection should be left with the applicant.

(c) *The selection of the range of altitude to be covered by the terms of the certification.* This selection is also closely related to (a) of this section and is analagous in its nature to (b) of this section. The simplest possible selection is that indicated by the minimum performance requirements contained in § 4b.110, namely, sea level for the purposes of the determination of the take-off and landing distances and certain of the rates of climb at 5,000 feet for the purpose of determining the en route rates of climb. The selection providing the greatest possible flexibility is the one in which these items of performance are determined for a range of altitude great enough to cover all anticipated routes over which the airplane may be operated.

(d) *The selection of the wing flap positions desired for certification.* Policies outlined in § 4b.111–1 will apply to this selection.

(e) *The selection of the critical speed[4] to be used in the determination of the take-off distance.* Policies outlined in § 4b.113–2 will apply to this selection.

§ 4b.100–3 *Flying qualities (CAA policies which apply to § 4b.100 (c)).* (a) It should be possible to operate the airplane safely at all anticipated altitudes without requiring exceptional attention and skill by the pilot or appropriate crew members.

(b) If there is less than two mph difference in the forward and rearward C. G. stalling speeds, all flying qualities may be based upon the forward C. G. stalling speeds. Otherwise, the stalling speed appropriate to the C. G. position should be used.

(c) If there is reason to believe that any of the flying qualities would be affected by altitude, they should be investigated for the most adverse altitude condition expected in normal operation.

[4] The practical effect of the selection of this speed is that it permits the applicant to define in the type certificate the limits of airplane weight and airport altitude within which the airplane may be operated by a scheduled air carrier in compliance with Part 40 of this subchapter.

§ 4b.105–1 *Use of ballast during flight tests (CAA policies which apply to § 4b.105).* Ballast should be carried during the flight tests whenever it is necessary to simulate pay load. Consideration should be given to the vertical as well as horizontal location of the ballast in cases where it may have an appreciable effect on the performance or flying qualities of the airplane. The strength of the supporting structures should be adequate to preclude their failure as a result of the flight loads that may be imposed during the tests.

§ 4b.111–1 *Selection of the wing flap positions (CAA policies which apply to § 4b.111).* (a) In the selection of the wing flap positions desired for certification, the flap position indicator should show flap up, take-off, en route, approach, and landing positions. Various items of performance are required to be determined at each of these flap positions. Section 4b.120 (d) requires that the stalling speed with the flap in the "approach" position should not exceed 110 percent of the stalling speed with the flap in the "landing" position. No plans for flight testing should be made until these positions are selected unless the applicant wishes to investigate systematically the effect of flap positions upon each or several of the items of performance which should be determined at the nominal position to be selected.

(b) The selection of multiple sets of wing flap positions is permitted in order to obtain optimum performance at various airports. However, it is recommended that the approval of multiple flap position settings for any one airplane be limited to two or at the most three.[5]

(c) A reasonable number of take-off flap settings in excess of three may be approved for operation under Civil Air Regulations, Parts 40, 41, 42, and 43 of this chapter if a dispatch procedure is established to provide pertinent operating limitations for the patricular take-off involved.

§ 4b.112–1 *Procedure for determining stalling speeds (CAA policies which apply to § 4b.112 (c)).* (a) Since all performance requirements are based upon some function of the stalling speeds, accurate measuring methods and careful piloting technique should be employed during the tests required for the determination of these speeds. The essential items to be considered when conducting tests to determine the stalling speeds are as follows:

(1) The air-speed system should have the same characteristics as outlined in § 4b.612–2 (a) (2). Preferably, an independent test air-speed system should be employed in measuring the stalling

[5] The reason for recommending a limited number of flap settings is due to the increasing complexity of T-category operation with the increasing number of variables such as power ratings, take-off flap settings and associated climb speeds, temperature accountability, etc., which are contained in the Airplane Flight Manual. Each additional set of flap positions approved increases the complexity with which the performance information in the Airplane Flight Manual can be evaluated to provide the proper level of safety, particularly in the take-off flight stage.

speeds such as a shielded or swivel impact pressure sensing head used in conjunction with a trailing static bomb. The air-speed system lag should be a minimum with the impact and static systems volumetrically balanced to eliminate the error associated with changing ambient pressure. The applicant may also determine and apply the lag correction associated with changing air speed (deceleration) to the instantaneous value of the air speed at which the airplane is declared to be stalled by the pilot.

(2) If the stalling speed tests are to be conducted with the propellers delivering zero thrust, some dependable instrument by means of which zero thrust condition can be ascertained should be available in flight. The general practice of establishing zero thrust rpm by calculation is acceptable.

(3) An accurate method for determining the fuel quantity should be established for the purpose of ascertaining the airplane's gross weight and C. G. position at the time of each stall.

(4) Test instrumentation should consist of the usual sensitive indicators, especially sensitive tachometers, in order to be able to maintain rpm which results in zero thrust. The speed-time history during the stall should be recorded photographically. A means (such as a signal light) should be provided so that the pilot's indication of the stall can be registered on the photo-recorder.

(b) The test methods required in the options that follow (see also Figure 1), are for the purpose of determining accurately the stalling speed used to calculate the pertinent performance climb requirements. The center of gravity positions for the stalling speed tests will vary with the option of the applicant as follows:

(1) *Climb requirement based on stalling speed at the most forward C. G. position desired for certification.* Under this option, the applicant should measure stalling speeds at the maximum forward C. G. position for certification at the maximum landing weight. However, in some cases where the forward C. G. limit is variable with weight, this would require that stalling speed tests be conducted at a weight and C. G. position outside of the approved structural limit. In lieu of this, and if the applicant so desires, he may measure the stalling speeds at the maximum forward C. G. position for maximum landing weight and also at the maximum forward C. G. position desired for certification and its associated weight.

(2) *Climb requirement based on stalling speed varying with C. G. position.* If this option is elected, the applicant should conduct a sufficient number of tests to adequately establish the variation of stalling speed with center of gravity position. In any case the stalling speed should be measured at the maximum forward C. G. position desired for certification and at the most rearward C. G. position desired for the purpose of varying the climb requirement with C. G. position.

(c) The deceleration rate actually utilized in each test may be obtained from the velocity-time history provided by photo-recorder data. The rate of deceleration determined from such data should not necessarily be related to the designated stall point but should, instead, be representative of the rate at which the airplane approached the stalled condition.

(d) *Configurations.* The stalling speeds should be demonstrated in the configurations shown in (1) and (2).

(1) *Configuration for demonstrating stalling speed $V_{s_0}$, § 4b.112 (a).*

Weight—Maximum landing or maximum weight at required C. G. position.
C. G. position—As required in (b) of this section.
Wing flaps—Landing position.
Landing gear—Extended.
Engines—Idling or not more than sufficient power for zero thrust at a speed not greater than 110 percent of the stall speed.
Propeller controls—Normal take-off pitch.
Cowl flaps—Closed.
Trim speed—1.4 $V_{s_0}$

(2) *Configuration for demonstrating stalling speeds $V_{s_1}$, § 4b.112 (b).*

Weight—Maximum landing or maximum weight at required C. G. position.
C. G. position—As required in (b) of this section.
Wing flaps—En route, take-off and approach positions.
Landing gear—Retracted.
Engines—Idling or not more than sufficient power for zero thrust at a speed not greater than 110 percent of the stall speed.
Propeller controls—Normal take-off pitch.
Cowl flaps—Closed.
Trim speed—1.4 $V_{s_1}$.

(e) *Test procedure and required data.* (1) Three representative stalls should be conducted for each flap position (en route, take-off, approach and landing) and at each C. G. position as required in (b) of this section using not more than zero propeller thrust. In cases where the flap positions have not been predetermined, it is permissible to conduct tests using four or more equally spaced flap angles.

(2) The stalling speed tests should be conducted in accordance with the procedure outlined in § 4b.160 (c). The air speed should be recorded at the time the airplane stalls as indicated by the pilot.

(3) Since the trim speed (1.4 $V_{s_1}$) and the speed at which zero thrust RPM is set (not more than 1.1 $V_{s_1}$) are a function of the stall speed, a practice run should be made in order to determine the approximate stalling speed.

(4) The following data should be recorded for each stall.

Pressure altitude.
Ambient air temperature.
Trim speed—1.4 $V_s$.
1.1 $V_s$.
RPM for zero thrust at 1.1 $V_s$.
RPM set in test.
Actual RPM at stall.
Stall speed—$V_s$.
Deceleration rate—$\frac{dv}{dt}$
Wing flap position.
Landing gear position.
Weight.
C. G. position.
Torque pressure.

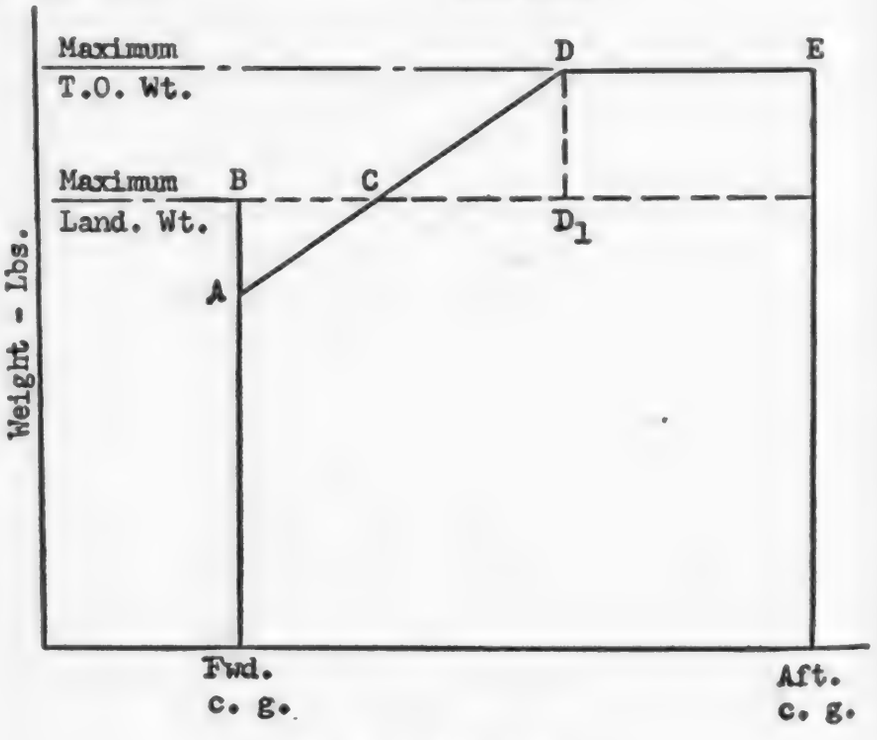



FIGURE 1—Weight—C. G. Positions.

Option 1—*Climb requirement based on forward C. G. stalling speed.*
(a) Tests may be conducted at one C. G. position only, that is "B".
(b) In lieu of (a), tests should be conducted at "A" and "C".
Option 2—*Climb requirement based on stalling speed varying with C. G.*
(a) Tests should be conducted along "A", "C", "$D_1$", etc., in order to adequately establish the variation of the stalling speed with C. G.

§ 4b.113–2 *Determination of the take-off field length (CAA policies which apply to § 4b.113).* (a) The dimensions of a take-off flight path should be such that, if the take-off runway has a length equal to the greater of two possible dimensions of that flight path, an engine failure may occur at any point along the runway and the airplane be able either to stop within the length of the runway or to continue and clear all obstructions to flight until a safe landing is made.

(b) In the tests required by §§ 4b.113 through 4b.116 generally one set of data at one altitude should be sufficient to determine take-off distances for altitudes from sea level to 8,000 feet. If a greater range of airport altitudes is desired, the tests should be conducted at two or more altitudes.

§ 4b.114–1 *Selection of the take-off speeds (CAA policies which apply to § 4b.114).* (a) It should be possible to continue the take-off acceleration after the failure of an engine at the speed $V_1$, until a minimum safe flying speed has been attained. This condition should be demonstrated by test in order to determine that it can be safely accomplished. Throttling an opposite engine should not be permitted during the demonstration.

(b) It should not be necessary to demonstrate a take-off that is continued after engine failure in the case where the applicant chooses to make the critical engine failure speed not less than the take-off safety speed. If $V_1$ is less than $V_2$, the tests should include an actual take-off during which the critical engine is made inoperative at the minimum $V_1$ speed and the take-off continued after the speed $V_2$ is attained.

(c) The minimum take-off safety speed should be at least 10 percent in excess of the minimum speed at which the airplane can be safely controlled when the critical engine is suddenly made inoperative under take-off conditions in flight. (See § 4b.133.)

§ 4b.115–1 *Determination of the accelerate stop distance (CAA policies which apply to § 4b.115).* (a) In order to establish a representative dimension for the distance that would be required in the event of an actual failure of an engine during take-off and the election of the pilot to stay on the ground, a sufficient number of runs should be conducted starting from rest and ending at rest to determine the transition distance for piecing together the acceleration and deceleration portion of the runs. In determining this distance, the wing flaps should be in the take-off position at least until the engines have been made inoperative, but they may thereafter be altered to aid the deceleration if it is demonstrated by the applicant that this may be done with reasonable ease and safety. The accelerate-stop tests should be demonstrated in accordance with the following provisions: These tests are predicated on the assumption that the airplane is not equipped with reverse pitch or automatic feathering propellers.[6]

(1) Accelerate and stop runs should be conducted at two weights and at one altitude, and one decleration run to demonstrate braking capacity and deceleration characteristics associated with the maximum altitude at which it is desired to certificate the airplane. Altitude conditions should be simulated by adjusting power and air speed. At least one representative run should be made for each of three engine failure speeds at each weight. If more than one flap setting is to be used for take-off, additional tests should be conducted to cover the flap range. (See § 4b.118–1 (d) (2).)

(2) If tests are not made at the maximum airport altitude, one landing or deceleration run should be made at an optional altitude for the purpose of demonstrating braking capacity and deceleration characteristics at maximum airport altitude and corresponding take-off gross weight with the airplane at this maximum take-off weight. The true ground speed at the start of the deceleration should correspond to that speed which would be experienced at the maximum airport altitude and weight. Discretion should be used in this test to assure remaining within safe structural and operational limits of the airplane.

(3) The accelerations may be made during take-offs and the decelerations during landings at the take-off configuration providing a minimum of one acceleration and stop run is conducted at the maximum take-off weight to determine the transition distance.

(4) Instrumentation should include means to record the airplane path relative to the runway against time in a manner to determine the horizontal distance-time history and a means should be provided to measure the wind velocity and direction, pressure altitude, engine rpm, manifold and/or torque pressure.

(i) The wind velocity should be measured adjacent to the runway at the

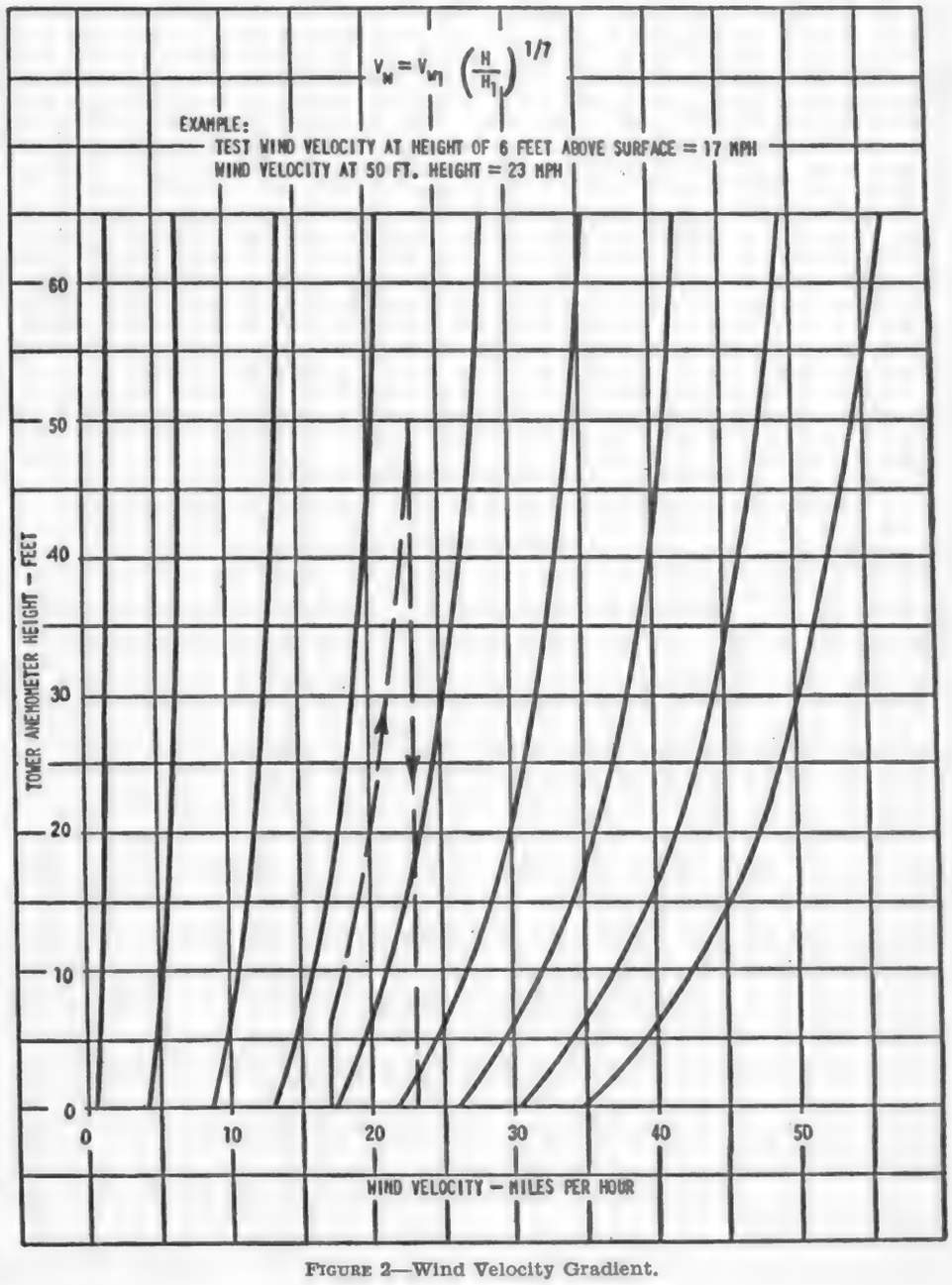



FIGURE 2—Wind Velocity Gradient.

[6] See § 4b.115–2 for policies covering automatic feathering propellers.

height of 6 feet above the runway surface for test purposes. If wind effect on runway lengths is shown in the Airplane Flight Manual (see § 4b.740–1 (d) (2) (x)), the manual data should be based on reported wind velocities for a 50-foot tower height. Figure 2 should be used to calculate the wind velocity at the 50-foot height from the wind velocity measured at the 6-foot height.

(5) A special tolerance of not greater than ±2 percent of the maximum take-off weight is allowed for the accelerate-stop distance tests.

(b) *Configuration.* The accelerate stop tests should be conducted in the configuration that follows:

Weight—Maximum take-off and one lower.
C. G. position—Most forward. (Most aft for reverse thrust decelerations.)
Wing flaps—Take-off position.
Landing gear—Extended.
Operating engines—During acceleration, all engines operating at full take-off power and rpm; cowl flaps set in take-off position (see § 4b.118–1 (d) (1)).
Inoperative engines—During deceleration, throttles closed; propellers windmilling in take-off pitch (except for failed engine with automatic feathering see § 4b.115–2); cowl flaps set in take-off position (see § 4b.118–1 (d) (1)).

(c) *Test procedure and required data.* (1) The airplane should be accelerated from full stop to each of three speeds up to $V_1$, the highest value of which should correspond to at least the maximum value desired for certification. The throttles should be closed at this speed and the airplane brought to a complete stop with the inoperative propellers windmilling (except when an auto-feathering device is installed).

(2) The airplane path relative to the runway should be recorded against time in a manner to determine the horizontal distance-time history.

(3) The following data should be recorded:

Pressure altitude.
Ambient air temperature.
Airplane gross weight.
Rpm (obtained during acceleration and deceleration).
Manifold pressure.
Torque pressure.
Carburetor air temperature.
Mixture setting.
Cowl flap position.
Wing flap position.
Time, distance and air speed at engine cut.
Slope of field.
Direction of run.

(4) In addition, humidity, wind direction and wind velocity should be recorded adjacent to the runway at a height of 6 feet above the runway surface.

§ 4b.116–2 *Determination of the take-off path (CAA policies which apply to § 4b.116).* (a) The recommended procedure for obtaining the take-off path is to determine the ground and climb portions separately and piece the corrected data together. The take-off flight path should be demonstrated in accordance with the following provisions:

(1) Three accelerations should be made during which the airplane is accelerated from a complete stop using all engines to speeds bracketing speed $V_1$ at which speed the critical engine fuel mixture is cut and the acceleration continued to speed $V_2$ with the inoperative engine propeller windmilling[1] in the take-off pitch setting. If $V_1$ is less than $V_2$, a take-off should be made on one of the above runs when the critical engine is failed at the lowest $V_1$ speed.

(2) The take-off flap setting should be maintained throughout the take-off flight path. If more than one flap setting is to be used for take-off, additional tests should be included to cover the flap range (see § 4b.118–1 (d) (2)).

(3) See § 4b.115–1 (a) (4) for instrumentation requirements.

(4) A special tolerance of not greater than ±2 percent of the maximum take-off weight is allowable for the ground portion of the accelerate distance.

(b) *General test program*—(1) *Accelerate to take-off safety speed, $V_2$ § 4b.116 (a)*—(i) *Configuration.* These tests should be conducted in the configuration that follows:

Weight—Maximum take-off and one lower.
C. G. position—Most forward.
Wing flaps—Take-off position.
Landing gear—Extended.
Operating engine(s)—Take-off rpm and manifold pressure, cowl flaps in take-off position (see § 4b.118–1 (d) (1)).
Critical inoperative engine—Fuel mixture cut on engine most critical performance-wise (see § 4b.118–1 (e) (2)), propeller windmilling in take-off pitch (feathered if automatic feathering device is installed) and cowl flaps in take-off position (see § 4b.118–1 (d) (1)).

(ii) *Test procedure and required data.* The airplane should be accelerated from a complete stop to the $V_1$ speed with all engines operating. The critical engine fuel mixture should be cut at the $V_1$ speed and the acceleration should be continued until $V_2$ speed is reached with the propeller of the inoperative engine windmilling in the take-off pitch. The airplane's path relative to the runway should be recorded against time in a manner to determine the horizontal distance-time history. In addition the following data should be recorded:

Pressure altitude.
Ambient air temperature.
Airplane gross weight.
Rpm.
Manifold pressure.
Torque pressure.
Mixture setting.
Cowl flap position.
Wing flap position.
Time, distance and speed at engine cut.
Time, distance and speed when $V_2$ is reached.
Slope of field.
Direction of run.

In addition, humidity, wind direction and wind velocity should be recorded adjacent to the runway at a height of 6 feet above the runway surface.

(2) *Initial take-off flight path segment test, § 4b.116 (b)*—(i) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off and one lower.
C. G. position—Optional (see § 4b.118–1 (c) (2)).
Wing flaps—Take-off position.
Landing gear—Extended.
Operating engine(s)—Take-off rpm and manifold pressure or full throttle, mixture setting for take-off, carburetor air heat control at cold and cowl flaps in take-off position (see § 4b.118–1 (d) (1)).
Critical inoperative engine—Throttle closed on engine most critical performancewise (see § 4b.118–1 (e) (2)), propeller windmilling in take-off pitch, (feathered if automatic feathering device is installed), mixture setting at idle cut-off and cowl flaps in take-off position (see § 4b.118–1 (d) (1)).

(ii) *Test procedure and required data.* The airplane should be climbed at the take-off safety speed, $V_2$. See § 4b.118–1 for test procedure and required data in connection with climb tests.

(3) *Second take-off flight path climb segment test, § 4b.116 (c)*—(i) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off and one lower.
C. G. position—Optional (see § 4b.118–1 (c) (2)).
Wing flaps—Take-off position.
Landing gear—Retracted.
Operating engine(s)—Take-off rpm and manifold pressure or full throttle, mixture setting for take-off, carburetor air heat control at cold and cowl flaps in take-off position (see § 4b.118–1 (d) (1)).
Critical inoperative engine—Throttle closed on engine most critical performancewise (see § 4b.118–1 (a) (2)), propeller windmilling in take-off pitch (feathered if automatic feathering device is installed), mixture setting at idle cut-off and cowl flaps in take-off position (see § 4b.118–1 (d) (1)).

(ii) *Test procedure and required data.* The airplane should be climbed at the take-off safety speed, $V_2$. See § 4b.118–1 for test procedure and required data in connection with climb tests.

(4) *Third take-off flight path climb segment test, § 4b.116 (d)*—(i) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off and one lower.
C. G. position—Optional (see § 4b.118–1 (c) (2)).
Wing flaps—Take-off position.
Landing gear—Retracted.
Operating engine(s)—Take-off rpm and manifold pressure or full throttle, mixture setting for take-off, carburetor air heat control at cold and cowl flaps in take-off position (see § 4b.118–1 (d) (1)).
Critical inoperative engine—Throttle closed on engine most critical performancewise (see § 4b.118–1 (e) (2)), propeller feathered and cowl flaps in minimum drag position.

(ii) *Test procedure and required data.* The airplane should be climbed at the take-off safety speed, $V_2$. See §4b.118–1 for test procedure and required data in connection with climb tests.

(5) *Fourth take-off flight path climb segment test, § 4b.116 (e)*—(i) *Configuration.* This configuration should be the same as for the third take-off flight path climb segment except that maximum continuous power is used on the operating engine(s).

(ii) *Test procedure and required data.* The airplane should be climbed at the take-off safety speed, $V_2$. See § 4b.118–1 for test procedure and required data in connection with climb tests.

§ 4b.118–1 *Test procedures for the determination of climb performance (CAA policies which apply to § 4b.118).* The test conditions and methods in (a) through (i) of this section assume that

[1] When a satisfactory fully automatic propeller feathering device is installed on the airplane, advantage of such a device may be used in showing compliance with this section. See § 4b.116–1 for reference to policies covering automatic propeller feathering systems.

the flight test data do not exhibit excessive scatter in points and that if such scatter makes the accuracy of the climb slopes questionable, additional tests and/or the applicants' previous flight test data for the particular configuration involved should be available. The following methods are also based upon consistent flight test data that can be properly correlated, and the use of previous acceptable test and correction methods. All new tests and correction methods will be judged upon their own merits. Polar curve or other equivalent methods are acceptable. The number of climb tests recommended for each case in (a) and (b) of this section represents a minimum, and in certain instances it is possible that more tests may be necessary.

(a) *For all take-off path segments, landing and approach climb.* (1) If it is desired to show that the required climb is met at the highest altitude and heaviest weight to be certificated, a constant rate of climb curve with altitude should be acceptable. One good climb should be satisfactory if it is 50 ft./min., or more, in excess of the required climb at the highest altitude for which certification is desired. Three climbs (at same altitude) should be made if the R/C is less than 50 ft./min. in excess of the required climb. (No climb variation with weight or altitude.)

(2) If it is desired to determine the rate of climb vs. altitude curve:

(i) For a sea level engine, or the critical altitude above the maximum altitude of certification (no breaks in the curve) where the altitude range is not in excess of 8,000 feet, two good climbs at each weight over the altitude range if weight spread is in excess of 10 percent but not less than 4 climbs if only one weight is used. If the altitude range is in excess of 8,000 feet, three climbs at each weight over the altitude range (6 climbs if weight range is in excess of 10 percent) should be conducted.

(ii) For installations where a critical altitude is within the altitude range (one break in the curve) two climbs on one slope of the curve should be conducted at each weight and at least one climb on the other slope (6 climbs for a weight spread of 10 percent or more). If the altitude range is in excess of 8,000 feet, consideration should be given to the need for a fourth climb at each weight.

(iii) For installations where two breaks in the R/C curve occur within the certification range, four climbs at each weight should be made.

(b) *For all engine enroute, one-engine-inoperative enroute and two-engines-inoperative enroute climbs.* (1) The regulations specify that these climbs should be determined at all altitudes of expected use and weight of certification. For each weight at least the following climbs should be conducted:

| Altitude range | SL–8,000 | SL–17,000 | SL–25,000 |
|---|---|---|---|
| No breaks in curve (1 slope) | 1 2 | 1 3 | 3 |
| 1 break (2 slopes) | 1 3 | 4 | 4 |
| 2 breaks (3 slopes) | ---------- | 4 | 4–5 |
| 3 breaks (4 slopes) | ---------- | 5 | 5 |

[1] But not less than 4 if only 1 weight is used.

(2) When an airplane is approved for more than one landing flap position, the climb requirements for the cruising and enroute configurations should be based upon the stall speed with the maximum sea level landing flap position for which the airplane is eligible.

(3) Where several climb points are available at the same test conditions the average point should be determined by averaging all consistent points not using the obviously erratic points (either high or low).

(c) *Weight and C. G. position.* (1) The climb tests should be conducted at maximum take-off weight for take-off climbs and at maximum landing weight for landing climbs. Climbs should also be made at an optional lower weight for both the take-off and landing configuration.

(2) Climbs may be made at any C. G. position except where the applicant elects to vary the stalling speed with C. G. position in which case the most critical C. G. position should be used. (See § 4b.112–1 (b).)

(d) *Airplane configuration.* (1) The cowl flaps should be set in the required position prior to conducting climb tests. The position of the cowl flaps for the take-off segments should comply with the provisions of the take-off cooling tests of § 4b.453.

(2) If more than one wing flap setting is to be used for take-off or landing, additional tests should be included to cover the flap range (see § 4b.111–1 (b)).

(e) *Engine power.* (1) The power should be stabilized prior to conducting the climb tests. The climbs should be made at constant power or at constant throttle setting. Unless limited by engine temperature, tests should be run for at least 3 minutes at take-off power. If limited by temperature, short duration tests of approximately 1 minute duration should be acceptable provided the stabilized climbing speed is attained by accelerating from a lower speed. Where maximum continuous power is required, climb tests should be of 5 minutes duration or not necessarily more than climbs of 2,000 feet but in any case not less than 3 minutes. If climb tests are conducted for short durations, such as take-off climbs which are limited by an engine rating of two minutes for take-off power, consideration should be given to the necessity of conducting an adequate number of tests in order to obtain results which are representative of the actual performance.

(2) For the one-engine-inoperative climb tests, it may be assumed that the critical inoperative engine, performance-wise, is the higher powered outboard engine unless there is evidence to indicate that another engine is more critical.

(3) For all climb tests, the power plant equipment and accessories appropriate to the specific configuration being tested should be in operation. During each test, a record should be made of such accessories in operation and of the particular engine from which power is being absorbed.

(f) The climb speeds are to be selected by the applicant, but should be consistent with the performance and cooling requirements involved. The air speed should be stabilized prior to conducting the climb tests.

(g) The airplane's wings should be maintained in a level attitude during all take-off climb tests with one engine inoperative.

(h) All climbs should be conducted in free air (without ground effect).

(i) In addition to the following items, the data necessary to establish the weight and C. G. position during the climb tests should be recorded.

Pressure altitude recorded at 15 second intervals.
Humidity recorded at 15 second intervals.
Air speed recorded at 15 second intervals.
Rpm.
Manifold pressure.
Torque pressure.
Carburetor air temperature.
Mixture setting.
Throttle setting.
Cowl flap position.
Wing flap position.
Landing gear position.

§ 4b.119–1 *Determination of all engine climb (CAA policies which apply to § 4b.119)*—(a) *Cruising configuration test, § 4b.119 (a)*—(1) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off and one lower.
C. G. position—Optional (see § 4b.118–1 (c) (2)).
Wing flaps—Optional.
Landing gear—Retracted.
Engines—Maximum continuous RPM and manifold pressure or full throttle, mixture setting in normal position, carburetor air heat control cold and cowl flaps in CAA hot day cooling position.

(2) *Test procedure and required data.* See § 4b.118–1 for test procedure and required data in connection with climb tests.

(b) *Landing configuration test, § 4b.119 (b)*—(1) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing and one lower.
C. G. position—Optional (see § 4b.118–1 (c) (2)).
Wing flaps—Landing position.
Landing gear—Extended.
Engines—Take-off power and manifold pressure or full throttle, mixture setting in normal position, carburetor air heat control cold and cowl flaps in approach position.

(2) *Test procedures and required data.* See § 4b.118–1 for test procedure and required data in connection with climb tests.

§ 4b.120–2 *Determination of one engine inoperative climb (CAA policies which apply to § 4b.120)*—(a) *Flaps in take-off position; landing gear extended, § 4b.120 (a).* Policies outlined in § 4b.116–2 (b) (2) will apply.

(b) *Flaps in take-off position; landing gear retracted, § 4b.120 (b).* Policies outlined in § 4b.116–2 (b) (3) will apply.

(c) *Flaps in en route position, § 4b.120 (c)*—(1) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off and one lower.
C. G. position—Optional (see § 4b.118–1 (c) (2)).
Wing flaps—Optional.
Landing gear—Retracted.

Operating engine(s)—Maximum continuous rpm and manifold pressure or full throttle, mixture setting at normal position, carburetor air heat control at cold and cowl flaps in CAA hot day cooling position.
Critical inoperative engine—throttle closed on engine most critical performancewise (see § 4b.118–1 (e) (2)), propeller feathered and cowl flaps in minimum drag position.

(2) *Test procedure and required data.* The airplane should be climbed at the en route climb speed. See § 4b.118–1 for test procedure and required data in connection with climb tests.

(d) *Flaps in approach position § 4b.120 (d)*—(1) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing and one lower.
C. G. position—Optional (see § 4b.118–1 (b) (2)).
Wing flaps—Approach position ($V_{s_1}$ must not exceed 1.10 $V_{s_0}$).
Landing gear—Retracted.
Operating engine(s)—Take-off rpm and manifold pressure or full throttle, mixture setting at normal position, carburetor air heat control at cold and cowl flaps in approach position.
Critical inoperative engine—Throttle closed on engine most critical performancewise (see § 4b.118–1 (e) (2)), propeller feathered and cowl flaps position optional.

(2) *Test procedure and required data.* The airplane should be climbed at the approach climb speed. See § 4b.118–1 for test procedure and required data in connection with climb tests.

§ 4b.121–1 *Determination of two engine inoperative climb (CAA policies which apply to § 4b.121)*—(a) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Two optional weights.
C. G. position—Optional (see § 4b.118–1 (c) (2)).
Wing flaps—Optional.
Landing gear—Retracted.
Operating engines—Maximum continuous rpm and manifold pressure or full throttle, mixture setting at normal position, carburetor air heat control at cold and cowl flaps in CAA hot day cooling position.
Critical inoperative engines—Throttles closed on outboard engine most critical performancewise (see § 4b.118–1 (e) (2)), and on adjacent engine, propellers feathered and cowl flaps in minimum drag position.

(b) *Test procedure and required data.* See § 4b.118–1 for test procedure and required data in connection with climb tests.

§ 4b.122–2 *Determination of the landing distances (CAA policies which apply to § 4b.122).* (a) When a particular airplane cannot comply with that part of § 4b.122 (d) regarding exceptional degree of skill on the part of the pilot in landing from the 50-foot height with power off, compliance with the regulation should be shown by applying sufficient power during the approach to permit satisfactory landing.

(b) In the tests required by §§ 4b.123 through 4b.124 generally one set of data at one altitude should be sufficient to determine the landing distances for altitudes from sea level to 8,000 feet. If a greater range of airport altitudes is desired, the tests should be conducted at two or more altitudes.

§ 4b.123–1 *Excessive wear of brakes or tires (CAA interpretation which applies to § 4b.123 (b)).* "Excessive wear" is interpreted as skidding of a tire or excessive heating of the brakes which requires replacement during a series of five official test landings.

§ 4b.123–2 *Determination of the landing distances (landplanes). (CAA policies which apply to § 4b.123).* (a) The landing tests should be demonstrated in accordance with the following provisions:

(1) Landings should be made over an imaginary 50-foot obstacle at the maximum landing weight and at a lower weight at one altitude.

(2) During the landing demonstrations, the glide path should be established by the pilot as set forth in § 4b.122. The forward thrust should not be increased beyond the 50-foot obstacle. The ground roll should lie as close to a rectilinear path as possible including the airplane stop point. During each demonstration landing, the airplane should be brought to a complete stop.

(3) *Instrumentation.* (i) Instrumentation should include a means to record the airplane's glide path relative to the ground and the ground roll against time in a manner to determine the horizontal and vertical distance-time histories.

(ii) A means should be provided to measure the wind velocity and direction, pressure altitude, and ambient air temperature. The wind measurement should be made at the height of 6 feet above the runway surface. If wind effect on runway lengths is shown in the Airplane Flight Manual (see § 4b.740–1 (d) (2) (x)), the manual data should be based on reported wind velocities for a 50-foot tower height. Figure 2 should be used to calculate the wind velocity at the 50-foot height from the wind velocity measured at 6 feet above the runway surface.

(iii) The ground roll distance from contact to full stop should be established by observers if it is difficult to establish the exact contact point by graphical means.

(4) A special tolerance of not greater than ±2 percent of the maximum landing weight is allowable for the landing distance tests.

(b) *Configuration.* The landing tests should be demonstrated in the configuration that follows:

Weight—Maximum landing and one lower.
C. G. position—Most forward for braked landings.
Wing flaps—Landing position.
Landing gear—Extended.

(c) *Test procedure and required data.* (1) Three landings should be conducted at each weight with the airplane stabilized in a glide at a calibrated air speed of not less than 1.3 $V_{s_0}$ approximately 1,000 feet (longitudinally) prior to reaching an altitude of 50 feet. Forward thrust should not be increased beyond the 50-foot obstacle; braking should not exceed manufacturer's approved maximum brake pressure and should be applied in such a manner as not to produce excessive wear of brakes and tires as evidenced by five measured landings. If more than one flap setting is to be used for landing, additional tests should be conducted to cover the flap range. (See § 4b.118–1 (d) (2).)

(2) The airplane path relative to the runway should be recorded against time in a manner to determine the horizontal and vertical distance-time history. In addition, the following data should be recorded:

Pressure altitude.
Ambient air temperature.
Airplane gross weight.
Rpm.
Manifold pressure.
Torque pressure.
Carburetor air temperature.
Mixture setting.
Cowl flap position.
Wing flap position.
Slope of field.
Direction of landing run.

(3) Humidity, wind direction and wind velocity should be recorded adjacent to the runway at a height of 6 feet.

§ 4b.124–1 *Determination of the landing distance (seaplanes) (CAA policies which apply to § 4b.124).* Policies outlined in §§ 4b.122–2 and 4b.123–2 will apply.

§ 4b.125–1 *Determination of the landing distances (skiplanes) (CAA policies which apply to § 4b.125).* Policies outlined in §§ 4b.122–2 and 4b.123–2 will apply.

§ 4b.130–1 *Procedure for demonstrating controllability qualities (CAA policies which apply to § 4b.130).* The general controllability and maneuverability qualities of the airplane should be observed and noted throughout the flight test program. The amount of force required to be exerted on the controls in conducting such maneuvers specified in § 4b.130 should also be noted.

§ 4b.131–1 *Procedure for demonstrating longitudinal control (CAA policies which apply to § 4b.131).* The flight tests specified in (a) through (h) of this section should be made in demonstrating compliance with § 4b.131. These tests may be conducted at an optional altitude (see § 4b.100–3 (c)). Where applicable, the following conditions should be maintained on the engines: propellers in low pitch, throttles—closed except as noted; cowl flaps—appropriate for the flight condition.

(a) *Longitudinal control recovery to 1.4 $V_{s_1}$, § 4b.131 (a).* The test specified by this requirement should be demonstrated with power off and also with maximum continuous power.

(1) *Configuration.* This test should be conducted in the configuration that follows:

(i) Maximum take-off weight, flaps and landing gear retracted, C. G. position—most aft.

(ii) Maximum landing weight, flaps extended in the maximum landing position; landing gear extended, C. G. position—most aft.

(The flap extended portion of this test may be combined with tests under (g) of this section.).

(2) *Test procedure and required data.* The airplane should be trimmed at a speed of 1.4 $V_{s_1}$; the nose should be pitched downward starting from any speed between 1.4 $V_{s_1}$ and $V_{s_1}$. The rate of increase in air speed should be satisfactory for prompt acceleration to a speed of 1.4 $V_{s_1}$. The following data should be recorded:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Engines, rpm and manifold pressure.
Pressure altitude.
Ambient air temperature.
Trim speed at 1.4 $V_{s_1}$.
Lowest speed from which pitch is satisfactory.
Altitude lost to regain speed of 1.4 $V_{s_1}$.

(b) *Longitudinal control, flap extension, § 4b.131 (b) (1)—(1) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward and most aft.
Wing flaps—Retracted.
Landing gear—Extended.
Engines—Power off.

(2) *Test procedure and required data.* The airplane should be trimmed at a speed of 1.4 $V_{s_1}$; the flaps should be extended to the maximum landing position as rapidly as possible. During this maneuver, it should be possible to control the airplane with one hand for a reasonable time without the necessity of changing the trim control. The following data should be recorded:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Engines, rpm and manifold pressure.
Pressure altitude.
Ambient air temperature.
Trim speed at 1.4 $V_{s_1}$.

(c) *Longitudinal control, flap retraction § 4b.131 (b) (2)—(1) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward and most aft.
Wing flaps—Maximum landing position.
Landing gear—Extended.
Engines—Power off.

(2) *Test procedures and required data.* The airplane should be trimmed at a speed of 1.4 $V_{s_1}$; the flaps should be retracted as rapidly as possible. During this maneuver, it should be possible to control the airplane with one hand for a reasonable time without the necessity of changing the trim control. The same data as are specified in (b) (2) of this section should be recorded.

(d) *Longitudinal control, flap retraction § 4b.131 (b) (3).* The maneuver shown in § 4b.131–1 (c) (2) should be repeated with take-off power on all engines.

(e) *Longitudinal control, power application, § 4b.131 (b) (4)—(1) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward and most aft.
Wing flaps—Retracted.
Landing gear—Extended.
Engines—Power off.

(2) *Test procedure and required data.* The airplane should be trimmed at a speed of 1.4 $V_{s_1}$; take-off power should be applied quickly without changing the air speed. During this maneuver, it should be possible to control the airplane with one hand for a reasonable time without the necessity of changing the trim control. The same data as are specified in (b) (2) of this section should be recorded.

(f) *Longitudinal control, power application, § 4b.131 (b) (5)—(1) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward and most aft.
Wing flaps—Maximum landing position.
Landing gear—Extended.
Engines—Power off.

(2) *Test procedure and required data.* The airplane should be trimmed at a speed of 1.4 $V_{s_1}$; take-off power should be applied quickly without changing the air speed. During this maneuver, it should be possible to control the airplane with one hand for a reasonable time without the necessity of changing the trim control. The same data as are specified in (b) (2) of this section should be recorded.

(g) *Longitudinal control, air speed variation, § 4b.131 (b) (6)—(1) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward.
Wing flaps—Maximum landing position.
Landing gear—Extended.
Engines—Power off.

(2) *Test procedure and required data.* The airplane should be trimmed at a speed of 1.4 $V_{s_1}$ and it should be possible to control the airplane with one hand for a reasonable time without the necessity of changing the trim control when

(i) The speed is reduced to 1.1 $V_{s_1}$,

(ii) The speed is increased to 1.7 $V_{s_1}$ or to the placard flap speed.

In addition to the data specified in (b) (2) of this section, the recorded data should also include the air speeds at 1.1 $V_{s_1}$ and 1.7 $V_{s_1}$ (or $V_{FE}$ whichever is the lesser).

(h) *Longitudinal control, flap retraction and power application, § 4b.131 (c)—(1) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward and most aft.
Wing flaps—Maximum landing position.
Landing gear—Extended.
Engines—Power noted.

(2) *Test procedure and required data.* The airplane should be maintained in a steady horizontal flight at a speed of 1.1 $V_{s_1}$; the flaps should be retracted from the maximum landing position with simultaneous application of not more than maximum continuous power. During this maneuver, it should be possible to prevent a loss of altitude without the use of exceptional piloting skill. The following data should be recorded:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Engines, rpm and manifold pressure before and after tests.
Pressure altitude.
Ambient air temperature.
Air speed at 1.1 $V_{s_1}$.

§ 4b.132–1 *Procedure for demonstrating directional and lateral control (CAA policies which apply to § 4b.132).* (a) When conducting directional and lateral control tests, the airplane should contain appropriate instrumentation in order to obtain the following data:

(1) *Section 4b.132 (a) and (b).* Instrumentation to indicate airplane heading angle and rudder force,

(2) *Section 4b.132 (c) and (d).* Instrumentation to measure bank angle.

(b) *General test program—(1) Directional control; general, § 4b.132 (a)—(i) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most aft.
Wing flaps—Approach position.
Landing gear—Retracted.
Cowl flaps—Appropriate for flight condition.
Operating engine(s)—Power to maintain level flight at 1.4 $V_{s_1}$ but not more than maximum continuous power.
Critical inoperative engine—Propeller feathered on engine most critical for controllability.

(ii) *Test procedure and required data.* The airplane should be trimmed as indicated above at any optional altitude (see § 4b.100–3 (c)). Reasonable sudden changes in heading to the left and right, using ailerons to maintain approximate level flight, should be made demonstrating a change of 15°, or the angle at which a dangerous condition is encountered, or at which 180 lbs. rudder force is required. The airplane should be satisfactorily controllable during this maneuver. The following data should be recorded:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Operating engine(s), rpm and manifold pressure.
Position of critical inoperative engine and its propeller.
Pressure altitude.
Ambient air temperature.
Trim speed at 1.4 $V_{s_1}$.
Rudder force at maximum deflection.

(2) *Directional control; four or more engines, § 4b.132 (b)—(i) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward.
Wing flaps—Climb position.
Landing gear—Retracted.
Operating engines—Power required for level flight at 1.4 $V_{s_1}$ but not more than maximum continuous power.
Critical inoperative engines—Propellers feathered on outboard engine most critical for controllability and on adjacent engine.

(ii) *Test procedure and required data.* The test procedure shown in (b) (1) (ii) of this section should be repeated with two critical engines inoperative. In addition to the data specified in (b) (1) (ii) of this section, the position of the critical inoperative engines and the propeller configuration should also be recorded.

(3) *Lateral control; general, § 4b.132 (c)—(i) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Most aft.
Wing flaps—Climb position.
Landing gear—Retracted and extended.
Operating engine(s)—Maximum continuous power.
Critical inoperative engine—Throttle closed on engine most critical for controllability, propeller feathered.

(ii) *Test procedure and required data.* Banked turns of 20° should be demonstrated with and against the inoperative engine from a steady climb at 1.4 $V_{s_1}$. The following data should be recorded:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Engine(s), rpm and manifold pressure.
Position of critical inoperative engine and its propeller.
Pressure altitude.
Ambient air temperature.
Trim speed at 1.4 $V_{s_1}$.
Rudder force at maximum deflection.
Aileron force at maximum deflection.

(4) *Lateral control; four or more engines, § 4b.132 (d)—(i) Configuration* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward.
Wing flaps—Climb position.
Landing gear—Retracted.
Operating engines—Power required for level flight at 1.4 $V_{s_1}$ but not more than maximum continuous power.
Critical inoperative engines—Propellers feathered on outboard engine most critical for controllability and on adjacent engine.

(ii) *Test procedure and required data.* Banked turns of 20° should be demonstrated with and against inoperative engines from steady flight at 1.4 $V_{s_1}$. The same data as are specified in (b) (3) (ii) of this section should be recorded.

§ 4b.133–1 *Determination of the minimum control speed, $V_{MC}$ (CAA policies which apply to § 4b.133).* (a) When demonstrating the minimum control speed, the applicant may choose one of three basic methods dependent on the inherent characteristics of the airplane or a combination of the methods is acceptable provided that the combination chosen does not allow the aircraft to exceed any of the limiting factors specified in § 4b.133. These methods are:

(1) With wings level and 180 pounds rudder force, or full rudder travel causing airplane to deviate from a constant heading, or airplane stall.

(2) With the wing on the engine operating side lowered 5° and 180 pounds rudder force, or full rudder travel causing airplane to deviate from a constant heading, or airplane stall.

(3) At 0° yaw and full rudder travel causing airplane to deviate from 0° yaw, or 180 pounds rudder force, or airplane stall.

(b) When it has been found that the aircraft is limited by the 180 pounds rudder force in any of the methods in (a) of this section, a plot of force vs. air speed should be made through a suitable range of speeds to substantiate the speed chosen at $V_{MC}$.

(c) Generally speaking, in aircraft equipped with right-hand rotating propellers, the left-hand outboard engine is the most critical when inoperative from the standpoint of control. This condition should be substantiated, however, by a comparative test with both the right and then the left outboard engines inoperative, measuring the force necessary to hold the airplane within the limits as specified in § 4b.133 at or slightly above the minimum control speed. When conducting this test it is imperative to hold all remaining factors equal so that a true comparison may be accomplished.

(d) All testing should be accomplished at the appropriate weights and powers for the range of approval desired. The minimum control speed should be determined for each take-off flap position selected for approval if the take-off flap is made variable with altitude.

(e) Civil Air Regulation Part 4b, Interpretation No. 1, interprets § 4b.133 (a) (8) as requiring the establishment of one engine inoperative minimum control speed with the propeller of the inoperative engine feathered providing that the airplane is equipped with an automatic feathering device acceptable to the Administrator under § 4b.10 for demonstrating compliance with the take-off path and climb requirements of §§ 4b.116 and 4b.120 (a) and (b). In such cases where the applicant chooses to demonstrate $V_{MC}$ with the propeller feathered, the value of $V_{MC}$ with the propeller windmilling should also be obtained and included in the Airplane Flight Manual.

(f) Configuration: This test should be conducted in the configuration that follows:

Weight—Maximum take-off. (If stall occurs prior to reaching $V_{MC}$, applicant may choose to demonstrate a lower $V_{MC}$ at a reduced weight.)
C. G.—Most aft.
Wing flaps—Take-off position.
Landing gear—Retracted.
Operating engine(s)—Take-off rpm and manifold pressure or full throttle, cowl flaps in take-off position.
Inoperative engine—Throttle closed, propeller windmilling or any other logical position, cowl flaps in take-off position.

(g) Test procedure and required data: After establishing the critical inoperative engine and the choice of method for demonstration, the tests for establishing the minimum control speed may be conducted. Using the configuration specified in § 4b.133, all engines should be adjusted for take-off power and a series of engine cuts made by moving the mixture control of the critical engine in idle cut-off position at consecutively lower air speeds until one of the limiting factors specified in § 4b.133 is experienced. When the minimum control speed is determined, a minimum of five demonstrations should be made to provide adequate proof that the chosen value meets the requirement. The following data should be recorded:

Pressure altitude.
Ambient air temperature.
Indicated air speed.
Engines, rpm and manifold pressure.
Torque pressure.
Carburetor air temperature.
Rudder force.
Bank angle.
Gyro direction indicator.
Yaw—If method is chosen where loss of airplane's ability to maintain 0° yaw is limiting factor specified in (a) (3) of this section.

§ 4b.140–1 *General trim qualities (CAA policies which apply to § 4b.140).* It should be possible to trim the airplane completely for any flight condition which is reasonable to assume will be maintained steadily for any appreciable time. Compliance for unsymmetrical power should be demonstrated with "wings level" or "zero yaw" when a yawmeter is installed as a part of the required equipment.

§ 4b.141–1 *Procedure for demonstrating lateral and directional trim (CAA policies which apply to § 4b.141)—(a) Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off and maximum landing.
C. G. position—Most forward and most aft with greatest lateral variation in useful load. Asymmetrical fuel loading should be considered.
Wing flaps—Retracted and maximum landing position.
Landing gear—Retracted and extended.
Engines—Power required for level flight.
Cowl flaps—Appropriate for flight condition.

(b) *Test procedure and required data.* It should be possible to maintain hands-off longitudinal, lateral, and directional trim at any speed from 1.4 $V_{s_1}$ to .9 speed at maximum continuous power in level flight or placard speed with the landing gear retracted and extended. The following data should be recorded:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Engines, rpm and manifold pressure.
Pressure altitude.
Ambient air temperature.
Trim speed at 1.4 $V_{s_1}$.

(Additional lateral and directional trim should be demonstrated in other configurations in conjunction with tests in § 4b.150.)

§ 4b.142–1 *Procedure for demonstrating longitudinal trim (CAA policies which apply to § 4b.142)—(a) Longitudinal trim during climb, § 4b.142 (a).*

(1) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Most forward.
Wing flaps—Retracted and take-off position.
Landing gear—Retracted.
Engines—Maximum continuous power.
Cowl flaps—Optional.

(2) *Test procedure and required data.* It should be possible to maintain hands-off longitudinal trim at a speed not in excess of 1.4 $V_{s_1}$ with the wing flaps retracted and in the take-off position. The same data specified in § 4b.141–1 (b) should be recorded.

(b) *Longitudinal trim during glide, § 4b.142 (b)—(1) Configuration.* This

test should be conducted in the configurations that follow:

Weight—Maximum landing.
C. G. position—Most forward for maximum landing weight.
Wing flaps—Retracted and maximum landing position.
Landing gear—Extended.
Engines—Power off, propellers windmilling.

(2) *Test procedure and required data.* It should be possible to maintain hands-off longitudinal trim at a speed not in excess of 1.4 $V_{s_1}$ with the wing flaps retracted and extended. This test should be repeated with the most forward C. G. position for landing regardless of weight. The same data specified in § 4b.141–1 (b) should be recorded.

(c) *Longitudinal trim during level flight, § 4b.142 (c).* The same configurations, test procedures and required data as are outlined in § 4b.141–1 should be followed in demonstrating longitudinal trim during level flight, § 4b.142 (c).

§ 4b.143–1 *Procedure for demonstrating longitudinal, directional, and lateral trim (CAA policies which apply to § 4b.143*—(a) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Most forward.
Wing flaps—Retracted.
Landing gear—Retracted.
Cowl flaps—Appropriate for flight condition.
Operating engine(s)—Maximum continuous power.
Critical inoperative engine—Throttle closed on engine most critical for trim, propeller feathered.

(b) *Test procedure and required data.* It should be possible to maintain hands-off longitudinal, directional, and lateral trim during climb at a speed of 1.4 $V_{s_1}$. In addition to the data specified in § 4b.141–1 (b), the position of the critical inoperative engine and its corresponding propeller should be recorded.

§ 4b.144–1 *Procedure for demonstrating trim for airplanes with four or more engines (CAA policies which apply to § 4b.144)*—(a) *Configuration.* This test should be conducted in the configuration that follows:

Weight—At which climb is equal to at least 0.01 $V_{s_0}^2$ at an altitude of 5,000 feet.
C. G. position—Most forward.
Wing flaps—Optional.
Landing gear—Retracted.
Cowl flaps—Appropriate for flight condition.
Operating engines—Maximum continuous power.
Inoperative engines—Throttles closed on outboard engine most critical for trim and on adjacent engine, propellers feathered.

(b) *Test procedure and required data.* It should be possible to maintain hands-off longitudinal, lateral, and directional trim at the same air speed used in demonstrating the two-engine-inoperative climb (see § 4b.121). The following data should be recorded:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Operating engines, rpm, manifold pressure, and cowl flap position.
Position of critical inoperative engines and their propellers.
Pressure altitude.
Ambient air temperature.
Climb speed.

§ 4b.150–1 *General stability requirements (CAA policies which apply to § 4b.150.* If an airplane design is encountered in which critical stability conditions may exist other than those prescribed in §§ 4b.151 through 4b.157 they should be investigated.

§ 4b.151–1 *Procedure for demonstrating static longitudinal stability (CAA policies which apply to § 4b.151).* (a) Once the airplane has been trimmed, it should tend to maintain the trim speed so that a conscious effort is required by the pilot to depart from that speed. A forward pressure on the control column should be necessary to increase the air speed and the reverse for a decrease in the air speed. These forces should be such that departures in speed in either direction from the trim speed would require control column pressure that increases approximately proportionately as the speed departs from the trim speed.

(b) It should be possible to make such changes in speed as may be required to perform a maneuver without the necessity of readjusting the trim in order to relieve very high control forces which would otherwise be necessary. Figure 3 has been prepared to indicate what should be required in the way of static longitudinal stability qualities.

(c) When conducting the stability tests specified in §§ 4b.152 through 4b.155, the elevator control force required to hold a given stabilized air speed should be measured at air speeds within the range specified by the requirements to define the curve of elevator control force versus air speed. The elevator control force should be measured at intervals of 20 mph in the region where the force indicates definite stability, and at 10 mph intervals when any change in stability

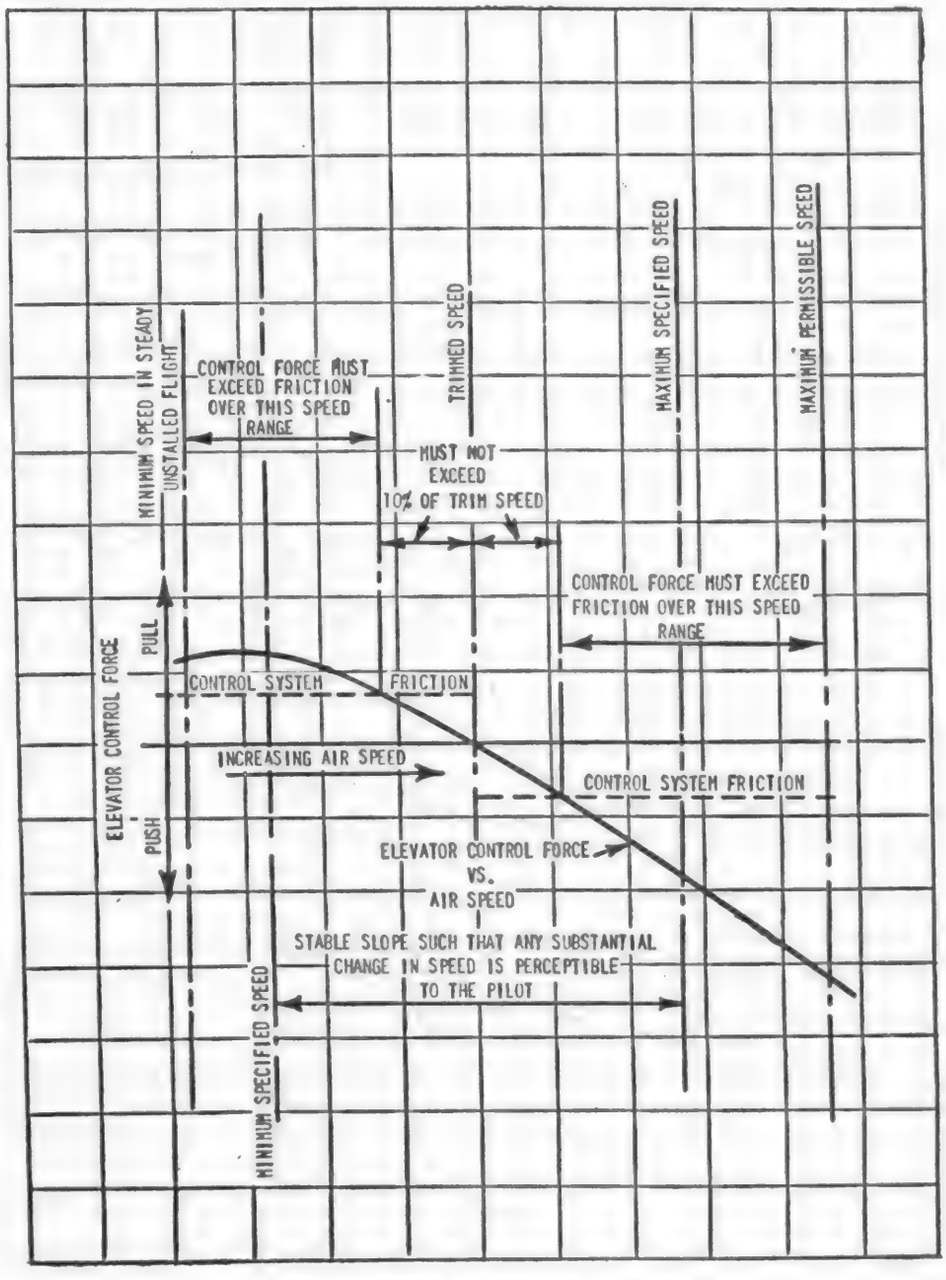

MINIMUM SPEED IN STEADY UNSTALLED FLIGHT
CONTROL FORCE MUST EXCEED FRICTION OVER THIS SPEED RANGE
TRIMMED SPEED
MAXIMUM SPECIFIED SPEED
MAXIMUM PERMISSIBLE SPEED
MUST NOT EXCEED 10% OF TRIM SPEED
CONTROL FORCE MUST EXCEED FRICTION OVER THIS SPEED RANGE
ELEVATOR CONTROL FORCE
PULL
PUSH
CONTROL SYSTEM FRICTION
INCREASING AIR SPEED
CONTROL SYSTEM FRICTION
ELEVATOR CONTROL FORCE VS. AIR SPEED
STABLE SLOPE SUCH THAT ANY SUBSTANTIAL CHANGE IN SPEED IS PERCEPTIBLE TO THE PILOT
MINIMUM SPECIFIED SPEED

FIGURE 3—STATIC LONGITUDINAL STABILITY

becomes apparent. An elevator control force indicator should be installed in the airplane in order to obtain this data. During these tests the airplane should return to an air speed within 10 percent of the original trim speed when the control is released slowly from speeds above and below the trim speed.

§ 4b.152–1 *Procedure for demonstrating stability during landing (CAA policies which apply to § 4b.152)*—(a) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most forward and/or most forward at maximum landing weight and most aft.
Wing flaps—Maximum landing position.
Landing gear—Extended.
Engines—Power off, propellers windmilling.
Cowl flaps—Appropriate for flight condition.

(b) *Test procedure and required data.* The airplane should be trimmed at a speed of 1.4 $V_{s_1}$ at any optional altitude (see § 4b.100–3 (c)). Static longitudinal stability should be demonstrated at speeds from just above the stall to 1.8 $V_{s_1}$ (or placard speed). The elevator control force necessary to maintain each speed should be recorded at approximate even increments of velocity within the above speed range. The speed range representing the maximum friction band from which the airplane will not return to the trim speed should be recorded. For aircraft having an increase in stable elevator control force gradient with forward C. G. travel, only the maximum force need be checked at forward C. G. Lateral and directional trim should also be checked (see § 4b.141–1). The following data should be recorded:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Engines, rpm and manifold pressure.
Pressure altitude.
Ambient air temperature.
Trim speed.
Elevator control force.

§ 4b.153–1 *Procedure for demonstrating stability during approach (CAA poilcies which apply to § 4b.153)*—(a) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum landing.
C. G. position—Most aft.
Wing flaps—Approach position.
Landing gear—Retracted.
Engines—Power required for level flight at 1.4 $V_{s_1}$.
Cowl flaps—Approach position.

(b) *Test procedure and required data.* The same procedures and data as outlined in § 4b.152–1 (b) should be followed in demonstrating stability for the approach configuration.

§ 4b.154–1 *Procedure for demonstrating stability during climb (CAA policies which apply to § 4b.154)*—(a) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Most aft.
Wing flaps—Retracted.
Landing gear—Retracted.
Engines—75 percent maximum continuous power.
Cowl flaps—Appropriate for flight condition.

(b) *Test procedure and required data.* The airplane should be trimmed at the best rate of climb speed except that this speed need not be less than 1.4 $V_{s_1}$. Static longitudinal stability should be demonstrated at speeds from just above the stall to the speed at which the control force becomes excessive but not to exceed $V_{NE}$. The curve of elevator control force vs. speed should have a stable slope between 85 percent and 115 percent of the trim speed and no reversal of elevator control force should occur throughout the speed range tested. Further test procedures and data to be recorded should be the same as are specified in § 4b.152–1 (b).

§ 4b.155–1 *Procedure for demonstrating stability during cruising (CAA policies which apply to § 4b.155)*—(a) *Cruising, landing gear retracted, § 4b.155 (a)*—(1) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Most aft.
Wing flaps—Retracted.
Landing gear—Retracted.
Engines—75 percent maximum continuous power.
Cowl flaps—Optional.

(2) *Test procedure and required data.* The airplane should be trimmed at the speed for level flight with 75 percent maximum continuous power. Static longitudinal stability should be demonstrated at speeds from just above the stall to the speed at which the control forces become excessive (50 lbs.), but not to exceed $V_{NE}$. Further test procedure and data to be recorded should be the same as are specified in § 4b.152–1 (b).

(b) *Cruising, landing gear extended, § 4b.155 (b)*—(1) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Most aft.
Wing flaps—Retracted.
Landing gear—Extended.
Engines—75 percent maximum continuous power or the power for level flight at the landing gear extended speed $V_{LE}$ whichever is lesser.
Cowl flaps—Appropriate for flight condition.

(2) *Test procedure and required data.* The airplane should be trimmed at the speed for level flight with 75 percent maximum continuous power or the power for level flight at the landing gear extended speed, $V_{LE}$, whichever is the lesser. Static longitudinal stability should be demonstrated at speeds from just above the stall to the speed at which the control forces become excessive (50 lbs.), but not to exceed $V_{LE}$. Further test procedures and data to be recorded should be the same as are specified in § 4b.152–1 (b).

§ 4b.156–1 *Procedure for demonstrating dynamic longitudinal stability (CAA policies which apply to § 4b.156).* Damping of accelerations and movement of the control should be noted when:

(a) The control column is quickly offset and immediately released and

(b) The control column is quickly offset and immediately returned to the trim position and held in this position.

§ 4b.157–1 *Procedure for demonstrating static directional and lateral stability (CAA policies which apply to § 4b.157).* (a) No real motion of the airplane involving roll is possible without yaw also being involved, and vice versa. In showing compliance with § 4b.157 the rolling and yawing stability should be investigated separately.

(b) Directional stability may be investigated by starting from steady flight in the required configuration and deflecting the rudder at a fairly rapid rate by the amount required to maintain a steady skid with the airplane yawed approximately 20° (as read on the directional gyro) while the wings are maintained level by use of the ailerons, and the speed held constant by means of the elevator control. When the steady condition has been established, the rudder should be released and, if the airplane is directionally stable, it should cease to skid; i. e., the yaw should decrease to approximately zero and, if also laterally stable the aileron deflection and force required to hold the wings level should also approach zero. The test should be conducted by executing skids both to the right and left, recording in each case the time required from the release of the rudder controls and the number of oscillations, if any, involved to recover to steady level flight.

(c) Lateral stability should be investigated by starting from steady flight in the required configuration and banking the airplane approximately 20° (as read on the gyro horizon) by means of the ailerons, while maintaining the original heading by means of the rudder, and the original speed by means of the longitudinal trimming device. When the steady slipping condition has been established, the aileron control should be released. If the airplane is laterally stable, it should cease to slip; i. e., the wing should return to an approximately level attitude, and the rudder deflection and pedal force required to maintain the heading should approach zero. The test should be conducted by executing slips from both to right and left, and in each case the time required from the release of the aileron control and the number of oscillations, if any, involved to recover to steady level flight should be recorded.

(d) In addition to the directional and lateral stability tests, § 4b.157 (c) contains provisions which should be used to test the airplane for rudder over balance.

(e) *Static directional stability test, § 4b.157 (a) and (c).*

CAUTION: Prior to conducting this test and that in (f) of this section, complete agreement should be reached between the applicant and the CAA Flight Test Agent to insure that the severity of control application will not result in loads exceeding the design limitations.

(1) *Configuration.* This test should be conducted in the configurations that follow:

Maximum take-off weight with wing flaps retracted.
Maximum landing weight with wing flaps extended.
C. G. position—Most aft.
Wing flaps—Retracted and maximum landing position.
Landing gear—Retracted and extended.

(2) *Test procedure and required data.* The following tests should be conducted at the altitude deemed most critical for the combination of power and aerodynamic damping effect:

(i) The airplane should be yawed slowly to the left and right using ailerons to hold wings level, and, when controls are released slowly, the tendency of airplane to recover from the skid should be noted.

(ii) The qualitative proportionality of rudder and aileron deflection and force during steady straight sideslips should be noted.

(iii) Damping of yawing and movement of control should be noted when the rudder is quickly offset and immediately released and when the rudder is quickly offset and immediately returned and held in the trim position.

(3) The tests in (e) (2) of this section should be conducted in the following configurations:

(i) Flaps in landing position and gear extended, at 1.2 $V_{s_1}$, power off, and 75 percent maximum continuous power.

(ii) The flaps and gear retracted at 1.2 $V_{s_1}$, and $V_c$ with 75 percent maximum continuous power.

(iii) Flaps and gear retracted at 1.2 $V_{s_1}$, with power off.

(4) The following data should be recorded for the tests specified in (e) (2) and (e) (3) of this section:

Weight.
C. G. position.
Wing flap position.
Landing gear position.
Engines, rpm and manifold pressure.
Pressure altitude.
Ambient air temperature.
Air speed at $V_{FE}$, 1.2 $V_{s_1}$ and $V_C$.
Rudder force at maximum deflection.

(f) *Static lateral stability test, § 4b.157 (b)—(1) Configuration.* This test should be conducted in the configurations that follow:

Maximum take-off weight with flaps retracted.
Maximum landing weight with flaps extended.
C. G. position—Most aft.
Wing flaps—Retracted and maximum landing position.
Landing gear—Retracted and extended.

(2) *Test procedure and required data.* The following tests should be conducted in the configurations specified in (e) (3) of this section and at the altitude deemed most critical for the combination of power and aerodynamic damping effect:

(i) Starting from steady straight flight the airplane should be banked 20° while a constant heading is held; the aileron control should then be released. The stability as evidenced by the tendency to raise the low wing should be positive at high speed and should not be negative at 1.2 $V_{s_1}$.

(ii) Damping of rolling motion and movement of controls should be noted when the aileron is quickly offset and immediately released and also when the aileron is quickly offset and immediately returned and held in the trim position.

(iii) The same data as specified in (e) (4) of this section should be recorded at air speeds of 1.2 $V_{s_1}$ and $V_c$.

§ 4b.158–1 *Procedure for demonstrating dynamic directional and lateral stability (CAA policies which apply to § 4b.158).* Damping of yawing and movement of the control should be noted during the test procedure in § 4b.157–1 (e) (2) (iii).

§ 4b.160–1 *Procedure for demonstrating stall tests, symmetrical power (CAA policies which apply to § 4b.160 (c) (2).* (a) The angle-of-attack during the stall maneuver should be increased at least to the point where the following two conditions are satisfied:

(1) Attainment of an angle-of-attack measurably greater than that for maximum lift.

(2) Clear indication to the pilot through the inherent flight characteristics that the airplane is stalled.

(b) The following procedure may be used to demonstrate that these two conditions are fulfilled.

(1) A photopanel or equivalent method of obtaining continuous records of the following variables at not greater than ¼ second intervals should be provided: indicated angle-of-attack, swivel static and shielded total pressure head or equivalent, pressure altitude, pitch and bank angle, normal acceleration, elevator position and force, aileron and rudder position.

(2) If it is evident that longitudinal stick force is always positive, that is, no reversal exists down to the stall, then time history of this item should not be required.

(3) In order to insure that an accurate recording of the indicated angle-of-attack is obtained, the sensing device should be located in a region where tuft surveys show that the streamlines undergo no radical change in direction up to the maximum angle contemplated. Regions well forward of the wing leading edge are desirable to keep the angular difference between true angle and indicated angle as small as possible.

(4) Means for indicating the stall warning point and the point at which the pilot is informed by the inherent flight characteristics that the airplane is stalled should be provided. This may consist of a light on the photopanel operated by a switch mounted on the control wheel. In order to insure that the camera records the light image a time delay device may need to be incorporated in the light circuit in cases where camera speed is low.

(c) *Configuration.* Stalls should be conducted in the configurations noted in the following listings and with cowl flaps appropriate for the flight condition. Power off stalls should be conducted with the engines idling and propellers in low pitch. For power on conditions, stalls should be conducted with that power necessary to maintain level flight at a speed of 1.6 $V_{s_1}$ with flaps in the approach position, landing gear retracted and maximum landing weight.

(1) *Stalls—straight flight.*

| Gross weight | C. G. | Power | Positions | |
|---|---|---|---|---|
| | | | Flap | Gear |
| Maximum landing | Most forward | Off | Retracted | Retracted.[1] |
| Do | do | Off | Take-off | Do.[1] |
| Do | do | Off | Approach | Do.[1] |
| Do | do | Off | Landing | Extended.[1] |
| Do | do | On | Approach | Do.[2] |
| Do | do | On | Landing | Do.[2] |
| Do | Most aft | Off | Approach | Do.[2] |
| Do | do | Off | Landing | Do.[2] |
| Do | do | On | Approach | Retracted. |
| Do | do | On | do | Extended. |
| Do | do | On | Landing | Retracted. |
| Do | do | On | do | Extended. |
| Maximum take-off | do | Off | Retracted | Do.[2] |
| Do | do | Off | Take-off | Do.[2] |
| Do | do | On | Retracted | Do.[2] |
| Do | do | On | Take-off | Do.[2] |

[1] May be demonstrated during stalling speed tests. See § 14b.112.
[2] Use extended, unless, due to direction of C. G. shift with gear, retracted gear is more critical. If retracted is more critical use retracted position for these stalls.

(2) *Stalls—30° banked turns.*

| Gross weight | C. G. | Power | Positions | | Direction |
|---|---|---|---|---|---|
| | | | Flap | Gear | |
| Maximum take-off | Most aft | Off | Retracted | Retracted | To right. |
| Do | do | Off | do | do | To left. |
| Do | do | On | do | do | To right. |
| Do | do | On | do | do | To left. |
| Maximum landing | do | Off | Landing | Extended | To right. |
| Do | do | Off | do | do | To left. |
| Do | do | On | do | do | Do. |
| Do | do | On | do | do | To right. |

(d) *Test procedure and required data.* The stall tests may be conducted at any optional altitude (see § 4b,100–3 (d)). The flight test procedure should be conducted in accordance with § 4b.160 (c) (1). The pilot should be provided with a yawmeter or equivalent means for maintaining the angle of yaw as near zero as possible. The operation of the photopanel recording system, previously described in (b) (1) of this section, should be started at least 20 mph above the stall speed and allowed to operate continuously until the stall recovery is completed. The pilot's indication of stall warning and the actual occurrence of the

stall should be obtained. In addition to the data obtained on the photopanel shown in (b) (1) of this section, the following information should also be recorded:

Weight.
C. G. position.
Ambient air temperature.
Wing flap position.
Landing gear position.
Engines, rpm and manifold pressure.

(e) *Data analysis.* Time histories should be plotted of the photopanel instruments. The stalling warning point (see § 4b.162–1) and the point at which "the inherent flight characteristics give a clear indication that the airplane is stalled" should be noted on the plots.

(1) Inspection of the plots will then show if the following two conditions are fulfilled:

(i) The indicated angle-of-attack increases steadily to a value measurably beyond that for maximum lift, and

(ii) The stall is evident to the pilot prior to initiation of recovery.

(2) Consideration should be given to the following points in the time-history analysis:

(i) The direction in which the elevator is moving, i. e., any nose down pitch or decrease in load factor not induced by inadvertent elevator motion,

(ii) Rudder and aileron movement with respect to uncontrollable roll,

(iii) The effect of lag in the air-speed system,

(iv) Rate of air speed change,

(v) Effect of pitching velocity or rolling velocity on indicated angle-of-attack. If possible, angle-of-attack time history should be drawn through points where pitching or rolling velocity are small. If corrections are unavoidable, the angular correction is simply $\tan^{-1} pd/V$ where $p$ is the rolling or pitching velocity, $V$ is the true air speed, and $d$ is the distance from the pitch or rolling axis, as the case may be, to the sensing device. It should be noted that this correction is applicable to either true or indicated angle-of-attack.

(vi) The indicated acceleration is a function of the angle the vertical axis of the accelerometer makes with the perpendicular to the earth's surface. Therefore, bank angle will seriously affect the maximum lift point. For example, a bank of 45° without loss of lift will result in a drop in indicated acceleration from 1.00 to .707. As a result acceleration data obtained in the region of $C_{L\max.}$ should be disregarded or corrected for bank angle when the bank angle exceeds nine or ten degrees.

§ 4b.161–1 *Procedure for demonstrating stall test, asymmetrical power (CAA policies which apply to § 4b.161).* (a) During this test the airplane should not become uncontrollable or lose an excessive amount of altitude when so stalled.

(b) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Most aft.
Wing flaps—Retracted.
Landing gear—Retracted.
Operating engine(s)—Power up to 75 percent maximum continuous power, cowl flaps optional.
Critical inoperative engine—Propeller optional, feathered or windmilling, cowl flaps appropriate for flight condition.
Trim speed—1.4 $V_{s_1}$.

(c) *Test procedure and required data.* This test may be conducted at any optional altitude (see § 4b.100–3 (c)). See § 4b.160 (c) regarding test procedure.

(1) The speed of the airplane should be reduced from the trim condition with the wings held level until the first of the following occurs:

(i) Full rudder or aileron deflection.

(ii) 180 lbs. rudder force.

(iii) Stall is reached.

(2) If full rudder or aileron deflection, or the 180 lbs. rudder force occurs first, the power should be reduced and the test repeated until sufficient control is available to complete the stall. The power may be reduced on the operating engine(s) before reapplying power on the operating engine or engines for the purpose of regaining level flight. The following data should be recorded at that point:

Pressure altitude.
Ambient air temperature.
Indicated air speed.
Engines, rpm and manifold pressure.
Torque pressure.
Carburetor air temperature.
Rudder force (if desirable).

(3) If stall is reached first, the same data should be recorded.

§ 4b.162–1 *Stall warning (CAA policies which apply to § 4b.162)* (a) The adequacy of stall warning should depend on the relative ease with which an airplane might be inadvertently stalled following the occurrence of stall warning. For example, if unmistakable warning occurs only 2 percent above the stall speed but undue pilot effort is required to reduce the air speed to the stall, the speed margin of 2 percent may be adequate. On the other hand if conscious effort is required to avoid stalling the airplane, a positive type of warning initiated at a relatively high speed above the stall may be required.

(b) Suggested suitable stall warnings are, buffeting which may be defined as general shaking or vibration of the airplane or elevator shake of sufficient magnitude to be unmistakable; or a stall warning instrument such as a stick shaker. A visual stall warning device which requires the attention of the crew within the cockpit is not considered acceptable by itself.

§ 4b.170–1 *Procedure for demonstrating longitudinal stability and control on the ground (CAA policies which apply to § 4b.170).* Taxiing tests at velocities up to 70 percent of the stalling speed should be conducted on smooth and rough ground which may likely be encountered under normal operating conditions. Particular attention should be paid to the following:

(a) *Taxiing over rough ground.* There is some evidence to indicate that critical loads can be built up in taxiing over rough ground, even when the shock-absorbing system is entirely satisfactory with respect to capacity for landing purposes.

(b) *Brakes.* Their adequacy when maneuvering on the ground and their tendency to cause nosing-over should be investigated. Any bad tendency will normally be exaggerated when taxiing in a strong side or tail wind.

§ 4b.171–1 *Procedure for demonstrating directional stability and control on the ground (CAA policies which apply to § 4b.171).* (a) Compliance with the requirement of § 4b.171 (a) may be demonstrated during tests for the establishment of the cross wind component velocity in accordance with § 4b.173.

(b) Compliance with the requirement of § 4b.171 (b) may be demonstrated during power off landings in other tests.

(c) Compliance with the requirement of § 4b.171 (c) may be demonstrated during taxiing prior to take-off or after landing from other flight tests.

§ 4b.172–1 *Shock absorbing mechanism tests (CAA policies which apply to § 4b.172).* The shock absorbing mechanism should be checked for satisfactory operation while taxiing, taking-off and landing during other tests in the type certification program.

§ 4b.173–1 *Cross wind demonstration (CAA policies which apply to § 4b.173).* (a) A cross wind component of not less than 0.2 $V_{s_0}$ should be established during type tests. Consequently, two results are possible:

(1) A cross wind component may be established at a value which is not marginal with the airplane's handling characteristics. This value should be included in the Operating Procedures section of the Airplane Flight Manual. The operation of the aircraft in cross winds greater than the value specified is not necessarily a hazard. Thus operation in cross winds of a greater value is entirely within the discretion of the operator.

(2) A critical cross wind component may be established at a value which is considered the maximum up to which it is safe to operate the airplane on the ground, including take-offs and landings. This value should be shown in the Operating Limitations section of the Airplane Flight Manual. Operation of the airplane in cross winds above the maximum safe value is considered hazardous and the operator should do so only on the same emergency basis that a pilot would be justified in exceeding any of the operating limitations such as air speed, engine rpm, C. G. limitations, etc.

(3) An operator may of course restrict the operation of his airplane to cross wind components of any value equal to or less than that established during the type certification tests.

(b) *Configuration.* This test should be conducted in the configurations that follow:

Weight—Maximum take-off and landing.
C. G. position—Most aft.
Flaps—Take-off and maximum landing positions.

(c) *Test procedure and required data.* At least three take-offs and landings should be made in cross wind components of 0.2 $V_{s_0}$ mph (or greater at ap-

plicant's option) to demonstrate satisfactory controllability and handling characteristics. The magnitude and direction of the cross wind should be established by the use of appropriate meteorological instruments.

§ 4b.180–1 *Water handling qualities (CAA policies which apply to § 4b.180).* Policies outlined in § 4b.182–1 will apply.

§ 4b.181–1 *Cross wind demonstration (CAA policies which apply to § 4b.181).* Policies outlined in § 4b.173–2 will apply.

§ 4b.182–1 *Procedure for demonstrating control and stability on the water (CAA policies which apply to § 4b.182).* (a) In order to check water stability, taxiing tests should be made in a cross wind determined in accordance with § 4b.181.

(b) Porpoising tendencies should be investigated and reported for extreme loading conditions.

(c) The ability to maneuver up to and while on the step should be investigated and the results reported.

(d) Compliance with the spray requirements may be substantiated while taxiing, taking off, and landing during other tests in the type certification program.

(e) If water rudders are provided, their effectiveness should be checked.

(f) Water taxiing ability should be investigated by actually taxiing the seaplane with appropriate use of power.

§ 4b.190–1 *Determination of flutter and vibration qualities during dive (CAA policies which apply to § 4b.190).* (a) The airplane should be observed for flutter and vibration tendencies during other tests in the type certification program. In case the design speed is limited at altitude by Mach number, the dive should be conducted at a combination of pressure altitudes and equivalent air speed to permit attaining the desired maximum Mach number and dynamic pressure simultaneously. Stability and control qualities should be noted during the dive.

(b) *Configuration.* This test should be conducted in the configurations that follow:

(1) *Maximum take-off weight.*

C. G. Position—Most aft.
Wing flaps—Retracted and take-off position.
Landing gear—Retracted.
Engines—Power as desired.
Cooling controls—Optional.
Pneumatic boots—Inoperative.

(2) *Maximum landing weight.*

C. G. position—Most rearward.
Wing flaps—Approach and landing positions.
Landing gear—Extended.
Engines—Power as desired.
Cooling controls—Optional.
Pneumatic boots—Inoperative.

(c) *Test procedure and required data.* The speed of the airplane should be slowly increased, from a steady flight high speed condition, until the maximum calibrated design dive speed for maximum take-off weight is attained. The power and trim may be adjusted during the dive. The dive should be entered at a sufficiently high altitude to insure safe recovery. In case the design speed is limited at altitude by Mach number, the airplane should be dived at constant Mach number (maximum design or highest desired by the applicant—but in no case less than that specified in § 4b.210 (b) (5)) until the maximum equivalent design dive speed is attained. The test should be repeated at maximum landing weight with flaps and gear extended diving to the maximum design flap speed or speeds.

CAUTION: Throughout these tests any control displacements should be executed gently.

(1) The following data should be recorded for each test:

Pressure altitude.
Ambient air temperature.
Indicated air speed.
Machmeter reading (if applicable).
Engines, rpm and manifold pressure.
Wing flap position.
Landing gear position.
Weight.
C. G. position.

§ 4b.324–1 *Procedure for demonstrating wing flaps that are not interconnected (CAA policies which apply to § 4b.324 (a)).* If the wing flaps are not mechanically interconnected, tests should be conducted to simulate flap malfunctioning (to the extent of the flaps being retracted on one side and extending on the other) during take-offs, approaches, and landings to demonstrate that the airplane is safe under these conditions.

§ 4b.334–1 *Procedure for testing landing gear retracting system (CAA policies which apply to § 4b.334)*—(a) *General, § 4b.334 (a).* The ability to extend and retract the landing gear at a speed of at least 1.6 $V_{s_1}$ should be demonstrated. If no other satisfactory means of decelerating the airplane are provided (such as dive brakes or other high drag devices), the ability of the landing gear retracting mechanism and wheel well doors to withstand the flight loads should be demonstrated under the following conditions:

Power required for level flight.
Air speed, at least 0.67 $V_C$.
Landing gear extended.

(b) *Emergency operation, § 4b.334 (c).* Extending the landing gear by use of the emergency system for demonstrating compliance with the requirement of this section may be accomplished during other tests in the flight program.

(c) *Operation test, § 4b.334 (d).* The time required to retract the landing gear at speed $V_2$ (see § 4b.116 (b)) should be demonstrated in flight under the following conditions:

Weight—Optional.
C. G. position—Optional.
Operating engine(s)—Take-off power.
Critical inoperative engine—Propeller windmilling on engine most critical from the gear retraction standpoint.

It is also desirable to obtain the time required to extend the landing gear for purposes of information.

§ 4b.337–1 *Brake tests (CAA policies which apply to § 4b.337).* If it is desired by the applicant to make the maximum possible use of the brakes in establishing the landing distance, and if also the contribution of the brakes to the total deceleration is relatively large, the brake system should be designed to permit the application of slightly less than half the braking deceleration developed under the conditions specified in this section. The following dual system is recommended: Dual wheel elements (drums or disc units), transmitting elements, power sources, master cylinders, etc., connected to a single pedal on each rudder pedal, such that the failure of any single one of these would leave half the total braking capacity symmetrically disposed about the plane of symmetry of the airplane. With such a system it should be possible to show compliance with § 4b.337 (a) by means of calculation based upon the test data necessary to establish the landing distance plus the brake data calculated by the aircraft manufacturer. If the system is designed so that under the conditions here specified appreciably less than half the total braking capacity remains or if the remaining capacity is asymmetrically disposed, tests should be conducted to determine that half the mean deceleration may in fact be developed and/or that the airplane may be safely controlled directionally while doing so.

(a) *General, § 4b.337 (a).* Such tests should be conducted as is deemed necessary to show compliance with the subject regulation. The deceleration rates should be determined as described in § 4b.123–2 (b) (3).

(b) *Brake controls, § 4b.337 (b).* General brake control force and operation should be noted throughout the flight test program to determine that they are satisfactory.

(c) *Parking brake controls, § 4b.337 (c).* During engine run-up prior to take-off for other tests, the parking brake control should be set, and without further attention, a demonstration should be made to determine that sufficient braking is maintained to prevent the airplane from rolling on a paved runway while take-off power is applied on the most critical engine.

§ 4b.337–3 *Replacement or modified brakes (CAA policies which apply to § 4b.337*—(a) *General.* Replacement or modified brake installations may be approved on the basis of dynamometer tests together with functional flight tests in lieu of measured accelerate-stop and landing distance flight tests if the decelerate performance based on dynamometer data is shown to be equal to or better than the original airplane flight test decelerate performance. Dynamometer tests which simulate actual airplane decelerate-distance tests may incorporate variable kinetic energy absorption rates simulating flight test deceleration conditions, and may include an energy allowance for the aerodynamic drag of the airplane which occurs during the deceleration portion of the accelerate-stop and landing runs. However, if any improvement in decelerate performance over that shown in the original airplane flight manual is desired, then this policy is inapplicable and complete airplane flight tests will be required.

(1) The procedures of (c) through (g) may be used for substantiating replacement or modified brake installations and may be applied to approved brakes of any manufacturer. The replacement

brake does not have to be manufactured by the maker of the original brake.

(2) Brakes which have been approved under TSO or preceding approval standards (whichever is pertinent) may be approved as a replacement brake on an existing airplane type upon the presentation of test reports and other pertinent computations showing:

(i) That, insofar as deceleration performance is concerned, the replacement or modified brakes are equal to or better than the original brake installation on the basis of dynamometer tests contained in this section, and

(ii) That, the replacement or modified brakes, when installed on the airplane, comply with the ground handling requirements of § 4b.170.

(b) *Brake modifications.* Modifications to a previously approved wheel-brake installation involving changes to component parts which will involve variations in kinetic energy absorption characteristics should be subjected to the dynamometer tests contained in (b) (1) in addition to the dynamometer tests specified in (e) and (f) for the accelerate-stop and landing conditions and should also include a check of operating and ground handling characteristics. Typical modifications which vary the kinetic energy absorption characteristics are as follows: changes of brake lining material, changes in brake discs or brake drum material, reductions in friction surface plan dimensions (area), etc.

(1) The minimum reliability standards for brakes referenced in TSO–C26 and contained in Specification AS227A should be used as a guide for modified brakes. However, section 5.4.3 of AS-227A may be applied as follows for evaluating such modifications:

(i) Thirty tests simulating the stopping of an airplane at 100 percent kinetic energy.[8]

(ii) One test simulating the stopping of an airplane at 125 percent kinetic energy.[8]

(c) *Determination of kinetic energy requirements.* (1) In the case of replacement brakes (that is, those brakes incorporating major design differences from those originally tested on the airplane) the kinetic energy (K. E.) to be absorbed on the dynamometer in compliance with provision (a) (2) of this section should be determined in accordance with the following formula:

$$K.E._{DYN} = K.E._{WV} - \tfrac{1}{2} K.E._{AD}$$

where:

$K.E._{WV}$ = the maximum kinetic energy as determined from the cost critical combination of weight and speed (in terms of ground speed). In determining the maximum speed, the effects of tailwind, altitude and flap setting should be taken into account.

$K.E._{AD}$ = the kinetic energy absorbed by aerodynamic drag of the airplane during the deceleration portion of the accelerate-stop and landing runs. This kinetic energy should be determined from available test data of the airplane or by other reliable calculations based on the basic parameters for the type of airplane involved.

(2) In the case of brakes modified as described in paragraph (b) of this section, the kinetic energy to be absorbed on the dynamometer should be determined in accordance with the following formula:

$$K.E._{DYN} = K.E._{WV} - K.E._{AD}$$

(i) This formula should not apply to modifications of a replacement brake which has been approved in accordance with (1) of this paragraph. Such modifications of a replacement brake should meet the same dynamometer requirements as the replacement brake did when originally installed.

(d) *Dynamometer test method.* (1) There should be no artificial cooling of the brakes during dynamometer tests. Ventilating air flowing normal to the tire tread is permissible.

(2) For wheel-brake installations where dual or duplex brakes are used, the dynamometer test should be conducted on an entire wheel-brake unit.

(3) Brake lining should not be run-in to a degree which would be greater than the run-in for new lining when installed on an airplane prior to being put in regular airline service.

(4) Due to wing-lift acting on the airplane, the dynamometer tests should account for tire rolling friction due to the differential in braking effect resulting from the varying rolling radius of the tire on the runway as compared to the constant tire radius at constant tire deflection which occurs throughout the entire dynamometer run.

(5) The dynamometer mass should be corrected so that the selected inertia equivalent (I. E.) will result in a correct or conservative kinetic energy test value.

(6) During dynamometer testing a variable brake pressure, which does not exceed that pressure which is available from the airplane brake system intended for use with the replacement brake, should be used in duplicating as nearly as practicable the original airplane torque-speed and velocity-time flight test data corrected for aerodynamic drag and tire rolling friction.

(e) *Accelerate-stop distance test.* This condition is normally the most critical from a kinetic energy standpoint. The original flight test accelerate-stop deceleration camera data obtained during the type certification tests of the airplane should be obtained and corrected for aerodynamic drag and tire rolling friction.

(1) Continuous records of dynamometer torque-speed or velocity-time data for at least three of the runs, when absorbing the required kinetic energy for the critical combination of take-off weight and $V_1$ speed, should duplicate, as nearly as practical, the original airplane brake deceleration data. These dynamometer records should be converted to corrected and faired velocity versus distance values and be plotted and superimposed on the curve for the original airplane velocity-distance data, and

(2) The average of the above three corrected dynamometer velocity-distance curves should be superimposed on the curve for the original airplane velocity-distance data.

(3) The curves plotted in (1) and (2) of this paragraph should compare favorably with the original corrected flight data over the entire speed range and should indicate that, from any given speed, the airplane stopping distance would be equal to or less than the distance resulting from the original brake installation at the required kinetic energy level corresponding to the actual accelerate-stop conditions which prevailed during the airplane type certification tests.

(4) If, in compliance with (1) of this paragraph, velocity-time data are submitted in lieu of torque-speed data, then sufficient spot-check calculations of the velocity-time data should be made to insure an accuracy comparable to the accuracy of torque-speed data. Inasmuch as torque-speed data are useful for airplane modification and design purposes, it is desirable that comparable and complete torque-speed data be included in the data submitted.

(5) Dynamometer time history recordings of brake pressure, torque, speed, and calculations for aerodynamic drag, tire rolling friction, and dynamometer mass correction, and all pertinent airplane data, should be submitted, together with an analysis showing the detailed calculations and charts necessary to establish the speed-distance relationship and comparison with the original airplane deceleration test data.

(f) *Landing distance test.* In order to substantiate landing distances, at least three dynamometer runs, using the critical combinations of landing weight and contact speed, should be conducted on the same brake unit. Landing distance data, compiled in accordance with the method described in paragraph (e) for accelerate-stop evaluation, should be submitted. The landing distance data, which are comparable to those of paragraph (e) for the accelerate-stop data, should compare favorably with the corrected airplane flight test results obtained with the original brakes in order to substantiate the adequacy of the replacement brakes, insofar as landing distances are concerned.

(g) *Aircraft functional tests.* The brakes should be tested on the airplane to determine their functional characteristics as indicated in (a) (2) of this section. Functioning characteristics should be observed during taxi and engine run-up conditions and at least three normal take-offs and landings, at the maximum landing weight, should be conducted. During these tests, the brakes should be checked for any undesirable characteristics such as "grabbing," fading," etc., and should at least be visually inspected, without dismantling, at the completion of the test in order to determine any evidence of malfunction or failure. If no

[8] The modifier of the brake should substantiate the fact that the original brake approval tests and the tests specified in (i) and (ii) were conducted under similar conditions and that the modified brake assembly is at least equal to that previously approved as an equipment item insofar as energy absorption and stopping time are concerned.

malfunctioning has occurred, this visual inspection is adequate, but if malfunctioning does occur, a thorough inspection should be conducted. If any characteristics arise which indicate that stopping distances would exceed the original values in the CAA Approved Airplane Flight Manual, then the Administrator may require actual camera recorded airplane deceleration tests or any other tests deemed necessary to establish the adequacy of the brakes.

§ 4b.350–1 *Noise and vibration characteristics (CAA policies which apply to § 4b.350 (g)).* Noise and vibration characteristics should be observed throughout the flight test program. If possible, noise levels should be measured and recorded in decibels.

§ 4b.351–1 *Procedure for demonstrating pilot compartment visibility (CAA policies which apply to § 4b.351)*—(a) *Nonprecipitation conditions.* Such tests as are deemed necessary to show compliance with § 4b.351 (a) should be conducted.

(b) *Precipitation conditions, § 4b.351 (b).* (1) The operation of the windshield wiper should be checked in actual or simulated precipitation conditions in order to demonstrate that adequate vision is provided for take-off and landing and at speeds up to 1.6 $V_{s_1}$.

(2) The windshield de-icing system should be checked for distribution and operation.

§ 4b.353–1 *Control tests (CAA policies which apply to § 4b.353).* Such tests as are deemed necessary to show compliance with the control movements and locations specified in § 4b.353 should be conducted.

§ 4b.371–1 *Carbon monoxide detection (CAA policies which apply to § 4b.371).* Policies outlined in § 4b.467–1 will apply.

§ 4b.372–1 *Combustion heaters equipped with carbon dioxide fire extinguishers (CAA policies which apply to § 4b.372).* The policies outlined in § 4b.484–1 apply.

§ 4b.380–1 *Protective breathing equipment (CAA policies which apply to § 4b.380 (c)).* The policies outlined in § 4b.651–2 apply.

§ 4b.384–1 *Cargo and baggage compartments equipped with carbon dioxide fire extinguishers (CAA policies which apply to § 4b.384).* The policies outlined in § 4b.484–1 apply.

§ 4b.400–1 *Engine and propeller operation (CAA policies which apply to § 4b.400).* The engines and propellers should be observed during the flight test program to determine satisfactory operation of these systems and their associated components.

§ 4b.401–2 *Propeller feathering system operational tests (CAA policies which apply to § 4b.401 (c)).* (a) Tests should be conducted to determine the time required for the propeller to change from windmilling (with the propeller controls set for take-off) to the feathered position at the take-off safety speed, $V_2$.

(b) (1) The propeller feathering system should be tested to demonstrate nonrotation up to 1.2 times the maximum level flight speed with one engine inoperative or the speed employed in emergency descents whichever is higher with:

Critical engine—Inoperative.
Wing flaps—Retracted.
Landing gear—Retracted.
Cowl flaps—Closed.

(2) A sufficient speed range should be covered to assure that the propeller feathering angle established on the basis of the high speed requirement does not permit rotation in reverse at the lower speeds. In addition, the propeller should not inadvertently unfeather during these tests.

(c) In order to demonstrate that the feathering system operates satisfactorily, the propeller should be feathered and unfeathered at the maximum operating altitude established in accordance with § 4b.722. The following data should be recorded:

Time to feather propeller at the one-engine-inoperative cruising speed.
Time to unfeather propeller to 1,000 r. p. m. at maximum operating altitude and one-engine-inoperative cruising speed.
Altitude of propeller feathering tests.
Ambient air temperature of propeller feathering tests.

§ 4b.406–1 *Fluid type propeller deicing test (CAA policies which apply to § 4b.406).* If the propellers are equipped with fluid type de-icers, the flow test should be conducted starting with a full tank of fluid and operated at maximum flow for a 15 minute timed period. The operation should be checked at all engine speeds and powers. The tank should be refilled to determine the amount of fluid used after the airplane is landed.

§ 4b.416–1 *Unusable fuel (CAA interpretation which applies to § 4b.416).* The unusable fuel should be considered that fuel drainable from the tank sump with the airplane on the ground in a normal attitude with the wings leveled laterally after a fuel tank runout* test has been made.

§ 4b.416–2 *Determination of unusable fuel supply and fuel system operation (CAA policies which apply to § 4b.416)*—(a) *General test program.* Tests for unusable fuel may be conducted at optional altitudes with all engines operating. The auxiliary fuel pumps should be turned "off" or "on" during the tests depending upon the normal operating procedure established for the airplane, or if the auxiliary pumps are being considered for use as emergency pumps they should be inoperative to at least 6,000 feet. The unusable fuel should be determined in each unique tank selection arrangement used for take-off and landing by making runouts during the most critical of the three conditions specified in (b), (c), and (d) of this section. When a runout occurs, the fuel selector switch should be turned to a full tank. It should be possible to regain engine fuel pressure in not more than 20 seconds after switching to any full tank when engine malfunctioning has become apparent due to depletion of the fuel supply in any tank from which the engine can be fed after the airplane has been restored to a level flight condition. The tanks should be drained after landing to determine the unusable fuel quantity. In the case of fuel in tanks other than those used for take-off and landing, the unusable fuel should be determined in the manner prescribed in (b) of this section or during ground tests.

(b) *Level flight at maximum continuous power or at the power required for level flight at Vc whichever is the lesser, § 4b.416 (b) (1)—(1) Configuration.* This test should be conducted in the configuration that follows:

Weight—Optional.
C. G. position—Optional.
Wing flaps—Retracted.
Landing gear—Retracted.
Cowl flaps—Optional.

(2) *Test procedure.* See (a) of this section.

(c) *Climb with take-off power at speed $V_2$, § 4b.416 (b) (2)—(1) Configuration.* This test should be conducted in the configuration that follows:

Weight—Not more than maximum landing weight.
C. G. position—Optional.
Wing flaps—Take-off position.
Landing gear—Retracted.
Cowl flaps—Optional.

(2) *Test procedure.* See (a) of this section.

(d) *Rapid application of maximum continuous power and subsequent transition to a climb at a speed $V_2$ determined in accordance with § 4b.114 (b), with retraction of flaps and landing gear, from a power-off glide at 1.3 $V_{s_0}$, with flaps and landing gear down at landing weight, § 4b.416 (b) (3)—(1) Configuration.* This test should be conducted in the configuration that follows:

C. G. position—Optional.
Cowl flaps—Optional.

(2) *Test procedure.* See (a) of this section.

§ 4b.417–1 *Hot weather fuel system tests (CAA policies which apply to § 4b.417).* (a) Hot weather fuel system tests should be conducted with fuel in the tanks normally used for take-off and landing, and with the maximum number of engines drawing fuel from the tank as would normally occur in flight. In the case of symmetrical fuel tank systems, the tests may be confined to one of each such system. Unweathered fuel should be used during these demonstrations. The fuel temperature should be 110° F. just prior to take-off. If the fuel must be heated to this temperature caution should be taken to prevent overheating during the process. The auxiliary fuel pumps should be turned "off" or "on" during the tests depending upon the normal operating procedure established for the airplane. If the auxiliary pumps are being considered for use as emergency pumps they should be inoperative to at least 6,000 feet. A fuel pressure failure

*A fuel tank runout is considered to have occurred when the engine fuel pressure shows a marked decrease and/or the first evidence of engine malfunctioning occurs.

is considered to occur when the fuel pressure decreases below the minimum prescribed by the engine manufacturer.

(b) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Corresponding to operation with full fuel tanks, minimum crew and ballast required to maintain airplane within center of gravity limits.
C. G. position—Optional, within allowable limits.
Wing flaps—Most favorable position.
Landing gear—Retracted.
Cowl flaps—In a position that provides adequate cooling in the hot day condition.
Engines—See (c) of this section.

(c) *Test procedure and required data.* The take-off and climb should be made as soon as possible after the fuel in the tank has been heated to 110° F. All engines should be operating at the take-off power from 1,000 feet below through the take-off critical altitude for a time not exceeding the take-off time limitation. The power should be reduced to maximum continuous power for the remainder of the climb. The air speed during the climb should not exceed that speed used in demonstrating the requirements specified in § 4b.119 (a). If the engines are normally operated with the auxiliary pumps "off," they should be turned "on" when a fuel pressure failure occurs. Restoration of fuel pressure should be noted and the climb continued to the maximum operating altitude selected by the applicant for certification. The following data should be recorded at reasonable time intervals:

Fuel temperature at start of test.
Fuel pressure at start of test and continuously during climb noting any pressure failures.
Auxiliary fuel pump operation.
Pressure altitude.
Ambient air temperature.
Air speed.
Engines, rpm and manifold pressure.
Comments on engine operation.

§ 4b.418–1 *Determination of fuel flow between interconnected tanks (CAA policies which apply to § 4b.418).* If there is a possibility of flow between interconnected tanks, it should be demonstrated that this flow is not sufficient to cause fuel to overflow from the tank vents during the conditions specified in § 4b.416 (b) for the determination of unusable fuel. These maneuvers should be accompanied by side slips, skids and other uncoordinated maneuvers that might occur in normal service. The tests should be conducted with full tanks.

§ 4b.426–1 *Determination of syphoning of fuel system vents (CAA policies which apply to § 4b.426).* Taxiing tests should be conducted which involve sharp turns followed by rapid acceleration into the take-off run and other ground maneuvers to assure that fuel will not escape from, or syphon from, the tank vents; nor should syphoning occur under the flight conditions specified in the test program for § 4b.418–1. All tests should be conducted with full tanks.

§ 4b.430–1 *Main fuel pump operational tests (CAA policies which apply to § 4b.430 (a)).* The ability to operate engines at an altitude of 6,000 feet using engine-driven fuel pumps alone should be demonstrated. The same procedure as outlined in § 4b.417–1 (c) for hot fuel tests should be followed. (This may be a ground test.)

§ 4b.437–1 *Test procedure for fuel jettisoning (CAA policies which apply to § 4b.437).* (a) In the case where the maximum take-off weight exceeds 105 percent of the maximum landing weight, provisions should be available for jettisoning fuel from the maximum take-off weight to the maximum landing weight at the corresponding altitude range of airports for which certification is sought. If the applicant has made sufficient jettisoning tests [10] to prove the safety of the jettisoning system, the tests may be made with fuel only. Otherwise, preliminary tests should be made with noninflammable fluid first and the results then checked using fuel. The following procedures and methods should be observed for demonstrating the operation of the fuel jettisoning system:

(1) *Fire hazard.* (i) Fuel in liquid or vapor form should not impinge upon any external surface of the airplane during or after jettisoning. Colored fuel, or surfaces so treated that liquid or vaporous fuel changes the appearance of the airplane surface may be used for detection purposes. Other equivalent methods for detection may be acceptable.

(ii) Fuel in liquid or vapor form should not enter any portion of the airplane during or after jettisoning. The fuel may be detected by its scent, combustible mixture detector or by visual inspection. In supercharged aircraft the presence of liquid or vaporous fuel should be checked with the airplane unpressurized.

(iii) There should be no evidence of fuel valve leakage after it is closed.

(iv) If there is any evidence that wing flap positions, other than that used for the test may adversely affect the flow pattern, the airplane should be placarded "Fuel should not be jettisoned except when flaps are set at __°."

(v) The applicant should select for demonstration the tanks or tank combinations which are critical for demonstrating the flow rate during jettisoning.

(vi) Fuel jettisoning flow pattern should be demonstrated from all normally used tank or tank combinations on both sides of airplane whether or not both sides are symmetrical.

(vii) Fuel jettisoning rate may be demonstrated from only one side of symmetrical tank or tank combinations which are critical for flow rate.

(viii) Fuel jettisoning rate and flow pattern should be demonstrated when jettisoning from full tanks using fuel.

(2) *Control.* (i) Changes in the airplane control qualities during the fuel jettisoning tests should be noted.

(ii) Discontinuance of fuel jettisoning should be demonstrated in flight.

(3) *Residual fuel.* The residual fuel should be measured by draining the tanks from which fuel has been jettisoned in flight, measuring the total drained fuel and subtracting from the total the unusable fuel quantity for each tank to determine if there is sufficient reserve fuel after jettisoning to meet § 4b.437. This may be a ground test.

(b) *Configuration.* Fuel jettisoning tests should be conducted in the configurations that follow:

(1) *Glide.*

Weight—Maximum take-off.
C. G. position—Optional.
Wing flaps—Retracted or in a position desired for approval.
Landing gear—Retracted or extended as desired by applicant.
Engines—Power off, propellers windmilling.
Cowl flaps—Optional.
Air speed—1.4 $V_{s_1}$.

(2) *Climb.*

Weight—Maximum take-off.
C. G. position—Optional.
Wing flaps—Retracted or in a position desired for approval.
Landing gear—Retracted or extended.
Operating engine(s)—Maximum continuous power, cowl flaps optional.
Critical inoperative engine—Throttle closed on engine most critical for fuel flow pattern propeller feathered, cowl flaps closed.
Air speed—One engine inoperative best rate of climb speed.

(3) *Level flight.*

Weight—Maximum take-off.
C. G. position—Optional.
Wing flaps—Retracted or in a position desired for approval.
Landing gear—Retracted or extended.
Engines—Power required for air speed of 1.4 $V_{s_1}$.
Cowl flaps—Optional.

(c) *Test procedure and required data.* When the airplane is trimmed in the configuration specified in items (b) (1) and (b) (2) of this section, the jettisoning valves should be opened and allowed to remain open until all jettisoning liquid has been disposed. If the configuration of (b) (3) of this section is critical, tests should also be conducted for this condition. This procedure may be carried out in segments if desired. The following data should be recorded:

Time to jettison fuel.
Fuel gauge quantity at reasonable time intervals.
Pressure altitude.
Ambient air temperature.
Indicated air speed.
Engines, rpm and manifold pressure.
Carburetor air temperature.

§ 4b.440–1 *Procedure for demonstrating oil cooling (CAA policies which apply to § 4b.440 (e).* Procedures for conducting cooling tests are those outlined in §§ 4b.452–1 and 4b.453–1.

§ 4b.449–1 *Procedure for demonstrating propeller feathering (CAA policies which apply to § 4b.449).* Tests should be conducted to demonstrate that the oil reserve for propeller feathering is adequate to accomplish the feathering procedure. This may be done on the ground by using an auxiliary source of oil for lubricating the engine during its operation.

[10] The basic purpose of these tests is to determine that the required amount of fuel may be safely jettisoned under reasonably anticipated operating conditions within the prescribed time limit without danger from fire, explosion, or adverse effects on the flying qualities.

§ 4b.452–1 *Procedure for demonstrating cooling climb (CAA policies which apply to § 4b.452).* (a) If the applicant is not able to provide data for the location of the engine having the hottest cylinder heads and bases, the following procedure should be accomplished. The cylinder heads and bases on one engine should be fully instrumented for the purpose of determining the location of the hottest cylinder head and base to be checked during the cooling climb. Thermocouples should be installed on one head of each of the remaining engines at the location shown to be critical on the fully instrumented engine. The hottest of the critical cylinder heads may be determined by measuring the temperatures of each of the engines under simulated climb conditions. The engine having the hottest cylinder head should be chosen as the engine to be tested for the cooling demonstration. Instruments for determining the oil inlet and cylinder base temperatures should be installed on this engine. The cooler operating outboard engine should be considered to be the critical inoperative engine unless there is reason to believe that another engine is more critical. The cooling tests should be conducted in an atmosphere which is free of any visible moisture.

(b) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Optional.
Wing flaps—Optional.
Landing gear—Optional.
Operating engine(s)—Maximum continuous power, mixture setting the same as used in normal operation and cooling controls in CAA hot day cooling position.
Critical inoperative engine—Throttle closed on cooler operating outboard engine, propeller feathered and cowl flaps closed.

(c) *Test procedure and required data.* (1) Prior to commencing the cooling climb, the engine temperatures should be stabilized in level flight at the lower of the two altitudes specified in § 4b.452 (c). During level flight the cooling climb conditions should be simulated by adjusting the airplane configuration to that shown in (b) of this section and maintaining the necessary power on the operating engine(s) to obtain the speed specified in § 4b.452 (d).

(2) When the temperatures have stabilized, i. e., the rate of temperature change is less than 2° F. per minute, the propeller on the inoperative engine should be feathered and the cooling climb commenced at maximum continuous power and at the specified configuration and speed. The climb should be continued for five minutes after occurrence of the highest temperature or until the maximum altitude desired for certification is reached.

(3) The above procedure should be repeated when demonstrating engine cooling for high blower except that temperatures should be stabilized in level flight with simulated climb conditions at an altitude of 1,000 feet below the critical altitude established for the high blower. The weight of the airplane should be such that it will permit a rate of climb equal to that specified in § 4b.120 (c).

(4) The following data should be recorded at no greater than one minute intervals:

Pressure altitude.
Ambient air temperature.
Engines, rpm and manifold pressure.
Carburetor air temperature.
Indicated air speed.
Hottest cylinder head temperature.
Hottest cylinder base temperature.
Oil inlet temperature.
Coolant temperature.
Fuel flow.

(5) In addition a record should be made of the mixture setting, blower setting, cooling control settings, and fuel grade.

§ 4b.453–1 *Procedure for demonstrating take-off cooling (CAA policies which apply to § 4b.453).*—(a) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Optional.
Wing flaps—Take-off position.
Landing gear—Optional.
Operating engine(s)—Take-off rpm or full throttle, mixture setting at take-off and cooling controls in take-off position.
Critical inoperative engine—Throttle closed on cooler operating outboard engine (see § 4b.452–1 (a)), propeller feathered and cowl flaps in optional position.

(b) *Test procedure and required data.* The temperature should be permitted to stabilize during level flight at the lowest practical altitude using 75 percent maximum continuous power on all engines and normal take-off cowl flap or coolant door setting. After the temperatures have stabilized, the configuration of the airplane should be adjusted as specified in (a) of this section and the climb commenced at the speed and continued for the same time interval as take-off power is used during determination of the take-off flight path (§ 4b.116). At the end of the take-off power time limit, the power should be reduced to maximum continuous. After power has been reduced, the configuration may be adjusted to the en-route condition specified in § 4b.452–1 (b) and the airplane accelerated to the en-route climb speed specified in § 4b.452 (d). The cooling climb should be continued for five minutes after the occurrence of the highest temperature. The same data as outlined in § 4b.452–1 (c) (4) and (5) should be recorded.

§ 4b.454–1 *Procedure for demonstrating cooling for seaplanes during water taxying operations (CAA policies which apply to § 4b.454).* (a) The cooling test for seaplanes should be conducted while taxying on water. The tank system should contain fuel of the minimum grade approved for the engines installed. Cylinder and oil inlet temperatures should be permitted to stabilize in flight or by taxying at reduced speed. The test should be conducted in an atmosphere which is free of visible moisture.

(b) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Maximum take-off.
C. G. position—Optional.
Wing flaps—Optional.
Engines—Sufficient power for air speed required in (c) of this section.
Cooling controls—Take-off position.
Mixture setting—Normal position for taxying.

(c) *Test procedure and required data.* After temperatures have stabilized, the seaplane should be taxied down wind for at least 10 minutes at a speed which is not more than 5 mph above the step speed. The same data as outlined in § 4b.452–1 (c) (4) and (5) should be recorded.

§ 4b.461–1 *Procedure for demonstrating carburetor air heat rise (CAA policies which apply to § 4b.461 (b)).* (a) The carburetor air temperature should be measured by a minimum of three thermocouples so arranged as to give an average air mixture temperature. This indicator should be calibrated prior to the test. The tests should be conducted at an altitude where the free air temperature is 30° F. or at two altitudes of different temperatures, one of which is near 30° F.

(b) *Configuration.* This test should be conducted in the configuration that follows:

Weight—Optional.
C. G. position—Optional.
Wing flaps—Optional.
Landing gear—Optional.
Engines—60 percent maximum continuous power.
Cowl flaps—Appropriate for flight condition.
Mixture setting—Normal cruising position.

(c) *Test procedure and required data.* (1) After all temperatures have been stabilized (i. e., when the rate of temperature change is less than 2° F. per minute) and with the airplane in level flight and full cold carburetor at 60 percent maximum continuous power, the following data should be recorded:

Pressure altitude.
Ambient air temperature.
Indicated air speed.
Carburetor air temperature.
Engines, rpm and manifold pressure.
Torque pressure.
Mixture setting.
Cowl flap setting.

(2) Preheat should then be applied slowly (power may be restored to 60 percent maximum continuous at the applicant's option) and the above data recorded again after the carburetor air temperature has stabilized. The carburetor heat rise should be determined from the results of the data.

§ 4b.465–1 *Procedure for demonstrating carburetor air cooling (CAA policies which apply to § 4b.465).* Carburetor air cooling should be demonstrated in conjunction with the tests required by §§ 4b.452 and 4b.453.

§ 4b.467–1 *Carbon monoxide detection (CAA policies which apply to § 4b.467 (a) (1) (d)).* (a) Any acceptable carbon monoxide detection method may be used in demonstrating compliance with § 4b.467 (a) (1) and (d), and with the ventilating requirements of § 4b.371. The tests should be conducted with the airplane's heater system in operation if there is any possibility of a system containing carbon monoxide. In aircraft employing thermal de-icing, tests should be conducted with the system operating at full capacity.

(b) *Configuration.* Carbon monoxide tests should be conducted in the configurations that follow:

(1) *Power on level flight.*

Weight—Optional.
C. G. position—Optional.
Wing flaps—Retracted.
Landing gear—Retracted.
Engines—Maximum continuous power.
Cowl flaps—Appropriate for flight condition.

(2) *Power off glide.*

Wing flaps—Retracted.
Landing gear—Retracted.
Engines—Idling.
Cowl flaps—Appropriate for flight condition.

(3) *Power approach.*

Wing flaps—Approach position.
Landing gear—Extended.
Engines—Power for level flight.
Cowl flaps—Appropriate for flight condition.
Air speed—Any speed from 1.4 $V_{s_1}$ to 1.6 $V_{s_1}$.

(c) *Test procedure and required data.* The air should be sampled with a carbon monoxide indicator in front of cabin heater opening(s) with heat on and at representative passenger and crew locations. If the airplane does not have pressurization equipment installed, the air should be sampled at the above locations with the windows closed and also partially opened. If the airplane is equipped for pressurization, carbon monoxide indications should be taken when the cabin is pressurized and also unpressurized.

§ 4b.467–2 *Determination of exhaust gas interference with visibility (CAA policies which apply to § 4b.467 (a) (5)).* The effects of exhaust gas interference with visibility should be observed during tests to demonstrate other night flying requirements.

§ 4b.611–1 *Procedure for checking arrangement and visibility of instrument installations (CAA policies which apply to § 4b.611).* The arrangement and visibility of the instruments should be checked throughout the type tests in order to supply the information which is necessary to complete the pertinent portions of Form ACA 283–4b, Type Inspection Report.

§ 4b.612–1 *Air-speed indicating system calibration (CAA policies which apply to § 4b.612 (a)).* (a) Unless a referenced air-speed system is provided, the airplane's system should be calibrated throughout as wide a range as necessary to cover the intended flight tests. The tests in (c) of this section are for the purpose of showing compliance with § 4b.612 (a) and not intended to cover the speed range of the flight tests. If an alternate air-speed indicating system is provided, it should also be calibrated. The air-speed indicating system should be calibrated in accordance with the following methods:

(1) The tests should be conducted in stabilized flight at air speeds throughout the speed range for the airplane configurations to be tested. The airplane's air-speed indicator should be calibrated against a reference air-speed system or against a ground speed course.

(2) A reference air-speed system should consist of either of the following:

(i) An air-speed impact pressure and static pressure measurement device or devices that are free from error due to airplane angular changes relative to the direction of the free stream or due to slipstream variation resulting from changes in airplane configuration or power. In addition the device or devices should have a known calibration error when located in the free stream, or

(ii) Any other acceptable air-speed calibration method, for example, the altimeter method of air-speed calibration. However, when using the altimeter method care should be exercised to measure the airplane's altitude accurately—especially at speeds below 125 mph.

(3) When establishing the airplane's true air speed by means of the ground speed course, flight between the two reference points should be made at constant air speed in two successive runs in opposite directions to eliminate the effect of wind. The runs should be made only in stable wind. The time to make the runs should be obtained by means of some calibrated device. The speed runs should not be made nearer the ground surface than a wing span's length. The reference and airplane's air-speed indicators should be calibrated instruments.

(4) If an alternate system is provided it may be calibrated against either the reference system or the airplane's system.

(b) *Configuration.* Air speed calibration tests should be conducted in the configurations that follow:

Weight—Between maximum take-off and maximum landing.
C. G. position—Optional.
Wing flaps and landing gear retracted.
Wing flaps in landing position and landing gear extended.
Engines—Optional power.
Mixture setting—Optional.
Cowl flaps—Optional.

(c) *Test procedure and required data.* Any one or any desired combination of the procedures in (1) through (3) of this paragraph may be used for calibrating the air-speed instrument. The air-speed should be measured or determined simultaneously from the airplane's and the reference system during stabilized runs for at least five speeds spaced throughout the speed range, the lowest not to exceed 1.3 $V_{s_1}$. The highest speed should not exceed $V_{NO}$, placard speed, or speed in level flight using maximum continuous power, whichever is lower. The speed spread between the test speeds should be limited to 10 mph from 1.3 $V_{s_1}$ to 1.6 $V_{s_1}$ or placard speed, and 30 mph from 1.6 $V_{s_1}$ to $V_{NO}$.

(1) *Speed course.* The air-speed and altitude should be stabilized before entering the speed course. Constant air speed should be maintained during each run. The runs should be made in both directions for each speed over the speed course. The following data should be recorded:

Time of day at beginning of run.
Time to make run.
Pressure altitude.
Ambient air temperature.
Air speed at several intervals during run.
Wing flap position.
Landing gear position.
Course distance.

(2) *Reference air-speed system.* Stabilized runs at the test speeds listed in (c) of this section should be made. The air speed from the airplane's air-speed system and the reference air-speed system should be read simultaneously. The following data should be recorded:

Time of day.
Airplane's indicated air speed.
Reference indicated air speed.
Pressure altitude.
Ambient air temperature.
Wing flap position.
Landing gear position.

(3) *Other acceptable air-speed calibration methods.* Stabilized flight runs at the test speeds should be made and the necessary data recorded to establish the airplane's air-speed system error and the configuration of the airplane.

§ 4b.612–2 *Static air vent system (CAA policies which apply to § 4b.612 (b)).* (a) If the altimeter installation is of the pressure type its operation will be affected by any error that exists in the static air pressure. Since the accuracy of the altimeter is of utmost importance the static air vent system should be calibrated. If separate or alternate vent systems are employed for the altimeter and airspeed indicator, separate calibrations are required. Where the altimeter, rate of climb indicator, and air-speed indicators are vented to the same static systems, the altimeter calibration may be made in conjunction with the air-speed calibrations.

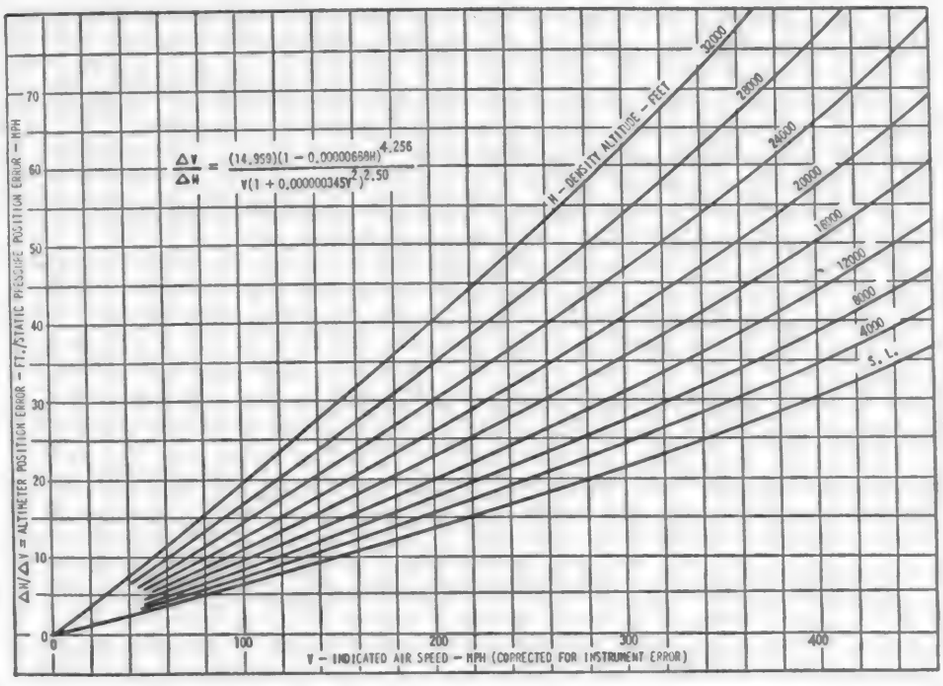
(b) The theoretical relationship between air-speed error and altimeter error is given in Figure 4 so that an altimeter calibration may be derived from the air-speed calibration if both use the same static vent provided that the total head installation is such as to provide true readings over the range of angles involved.

§ 4b.612–3 *Calibration of magnetic direction indicator (CAA policies which apply to § 4b.612 (c)).* It is recommended that the magnetic direction indicator be calibrated while the airplane is on the ground with its engines and electrical equipment operating. The calibration data should be included in Form ACA 283–4b.

§ 4b.642–1 *Procedure for testing flare ejection (CAA policies which apply to § 4b.642 (b)).* When flares are released, they should clear the aircraft structure when the airplane is flown at a speed of 1.4 $V_{s_1}$ with the wing flaps and landing gear in both extended and retracted positions. If it is obvious that the flaps and gear have no effect upon the flare's path, the test may be conducted at one configuration. It is permissible to use dummy flares with parachutes for this test.

§ 4b.651–2 *Protective breathing equipment (CAA policies which apply to § 4b.651 (h)).*—(a) *Conditions under which protective breathing equipment may be necessary.* These conditions are those outlined in §§ 4b.484–1, 40.205–2, 41.24c–2 and 42.29–2.

(b) *Oxygen systems for flight deck duty.* The demand type oxygen system, or the diluter-demand type system with the lever of the diluter-demand regulator




V—Indicated Air Speed—MPH (Corrected for Instrument Error)

Figure 4—Altimeter Position Error

set at "100% OXYGEN" (Automix "OFF") are recommended for use as protective breathing equipment. However, a continuous flow protective breathing system may also be used. In any case the equipment should meet the requirements of § 4b.651 (h).

(c) *Portable equipment for flight deck duty.* Portable protective breathing units of the demand type may be used to meet the requirement of § 4b.651 in lieu of installing a fixed protective breathing system. Portable continuous flow protective breathing units may also be used, but should not be used during fire fighting in Class A or B cargo compartments since any unused oxygen escaping from around the face mask might aggravate the existing fire.

(d) *Masks and goggles.* (1) Protective breathing masks should fit snugly to prevent the entry of noxious gases. Continuous flow protective breathing masks should have no apertures through which outside air could be drawn into the system and should have a rebreathing bag of at least ⅔ liters capacity. The masks should be installed so as to be readily available to the appropriate crew members. It should be possible for at least the pilot or copilot to maintain ground to air radio voice communications when utilizing the protective breathing masks.

(2) Eye protecting goggles may be a part of or separate from the breathing mask. The goggles should provide an adequate field of vision and a means should be provided to overcome any unsatisfactory fogging tendency of the goggles. Periodic application of an effective anti-fogging agent on the lens is a satisfactory means of overcoming fogging.

(e) *Operating instructions.* Operating instructions appropriate to the type of system and masks installed should be provided for the flight crew on placards and/or in the Airplane Flight Manual.

§ 4b.651–7 *Supply required for continuous flow supplementary breathing systems (CAA policies which apply to § 4b.651 (b)).* (a) (1) In computing the supply of oxygen required for a continuous flow system, the formula presented in the following paragraph may be used.

$$S = S_1 + S_2 + - - S_n$$

where:

S = Total supply of oxygen required in cubic feet. $S_1, S_2, - - S_n$ = the supply of $O_2$ needed for each of the various cabin pressure altitudes which will be maintained during the flight.

(2) Each of the above supplies, namely $S_1$, $S_2$, $- - S_n$, may be computed as follows:

$S = N \times F \times T \times 2.12$

$S$ = supply of oxygen required in cubic feet (STPD). (To obtain supply in terms of cubic feet at 70° F. multiply cubic feet (STPD) by 1.08.)

$N$ = number of oxygen users.

$F$ = the actual flow in LPM (STPD) delivered to each oxygen mask at the cabin altitude under consideration. (See § 4b.651–7 (b).)

$T$ = time in hours at the cabin altitude under consideration.

2.12 = multiplying factor for converting the oxygen mass flow from liters per minute to cubic feet per hour.

NOTE: In computing the supply of oxygen for a given installation, those operating rules of the Civil Air Regulations which specify the amount of oxygen to be carried for operating at various altitudes should be considered.

(b) (1) The intent of § 4b.651 (b) is to insure that for each oxygen user, a partial pressure of 149 mm $H_g$ of oxygen is maintained in the inspired air at a breathing rate of 15 lpm BTPD, at altitudes up to 25,000 feet. The rates of flow specified in Figure 4b–21 in Part 4b satisfy the intent of § 4b.651 (b) and constitute the values for "F" in the supply equation when there is no loss of bottle oxygen from the system (including the mask) when a 15 lpm BTPD breathing rate is maintained.

(2) The oxygen mask, since it constitutes part of the system, will influence the value of "F". Continuous flow masks with rebreather bags which are currently standard types for aviation usage are satisfactory with the flow rates indicated by Fig. 4b–21. Where a receptacle or mask design differs from these, the manufacturer should be requested to supply information concerning the flow rate necessary to maintain the 149 mm $H_g$ partial pressure at a 15 lpm BTPD breathing rate. If the actual mass flow is greater than the minimum required, then the higher flow rate should be used as the value for "F".

(3) It is possible that certain automatic continuous flow regulators will furnish oxygen flows in excess of the minimum required; in this case, the actual flow rates should be used as the values for "F".

NOTE: (1) BTPD signifies gas at 37° C. (body temperature), ambient pressure, dry.
(2) STPD signifies gas at 0° C., 760 mm Hg., dry.

§ 4b.651–8 *Supply required for diluter-demand system (CAA policies which apply to § 4b.651).* (a) Tests conducted by the Armed Forces on currently available diluter-demand regulators indicate that some types deliver more oxygen than is require by Fig. 4b–21 in Part 4b. Consequently, in computing the supply required for a diluter-demand system, the flow characteristics at various altitudes should be obtained from the manufacturer of the regulator. Where this information is not available, the values listed in the following table may be used for Air Force-Navy approved diluter-demand regulators:

| Altitude in feet: | *Flow per person in LPM (STPD)*[1] |
|---|---|
| 8,000 | 1.90 |
| 10,000 | 1.90 |
| 15,000 | 2.10 |
| 20,000 | 2.50 |
| 25,000 | 4.10 |

[1] These values are based on tests on a large group of men using the equipment at the altitude specified. The values listed are those calculated to completely protect 95 percent of the population.

(b) The formula outlined in § 4b.651–7 (a) may be used in computing the supply of oxygen for supplementary breathing purposes.

§ 4b.651–10 *Means for determining oxygen flow to crew members (CAA policies which apply to § 4b.651 (e))*—(a) *Supplementary breathing systems.* (1) Where continuous flow or diluter-demand systems are used for supplementary breathing purposes, each crew member should have an individual flow indicator for determining oxygen flow or the operator may establish a suitable procedure for determining oxygen flow and should include such procedures in the Airplane Flight Manual.

(2) If flow indicators are used, the indicator for any particular crew member should be located so as to be easily observed by him while he is at his crew station. Acceptable flow indicators are listed in § 4b.651–12.

(3) If a suitable procedure is to be used for determining oxygen flow in non-pressurized cabin aircraft, the procedure should include initial and periodic checking of the oxygen flow by each crew member by any acceptable method. Some of the acceptable methods are described under § 4b.651–11 (a) and (b). In pressurized cabin aircraft when supplementary oxygen is required immediately following cabin pressurization failure, positive means for determining flow under emergency conditions should be established which would not involve delay or activities which would interfere with a flight crew member's performance of his primary duties. Since utilizing one of the methods for determining oxygen flow permitted for supplementary breathing equipment described under § 4b.651–11 (a) and (b) involves some time delay a flight crew member could don his protective breathing equipment following a pressurization failure because with such equipment oxygen flow is immediately apparent. As soon as some degree of control of the emergency has been established and sufficient time is available to determine oxygen flow by one of the methods mentioned above, he could change over to his supplementary breathing equipment.

(b) *Protective breathing systems.* No flow indicators are required in protective breathing systems since with these systems the lack of oxygen flow would be immediately evidenced by the oxygen user's inability to inhale while wearing mask.

[F. R. Doc. 54–5547; Filed, July 19, 1954; 8:53 a. m.]

## Chapter II—Civil Aeronautics Administration, Department of Commerce

[Correction to Amdt. 36]

### Part 601—Designation of Control Areas, Control Zones, and Reporting Points

ALTERATIONS

Paragraph 8 of Amendment 36 (19 F. R. 4298) to Part 601 of the Regulations of the Administrator, amending § 601.1232 to change the control area extension for Miami, Florida, and paragraph 9 of Amendment 36 to Part 601 of the Regulations of the Administrator, amending § 601.1235 to revoke the control area extension for West Palm Beach, Florida, are rescinded due to inability of airline operators to comply with revised operating procedures.

The control area extension presently in effect for Miami, Florida under § 601.1232, as adopted March 6, 1951, and the control area extension presently in effect for West Palm Beach, Florida under § 601.1235, as adopted on March 6, 1951, will remain in effect on and after July 20, 1954 and will not be amended as provided in paragraph 8 and paragraph 9 of Amendment 36.

(Sec. 205, 52 Stat. 984, as amended; 49 U. S. C. 425. Interprets or applies sec. 601, 52 Stat. 1007, as amended; 49 U. S. C. 551)

[SEAL] F. B. Lee,
*Administrator of Civil Aeronautics.*

[F. R. Doc. 54–5574; Filed, July 19, 1954; 8:54 a. m.]

[Amdt. 69]

### Part 610—Minimum en Route IFR Altitudes

MISCELLANEOUS AMENDMENTS

The minimum en route IFR altitudes appearing hereinafter have been coordinated with interested members of the industry in the regions concerned insofar as practicable. The altitudes are adopted without delay in order to provide for safety in air commerce. Compliance with the notice, procedures, and effective date provisions of section 4 of the Administrative Procedure Act would be impracticable and contrary to the public interest, and therefore is not required.

Part 610 is amended as follows:

1. Section 610.16 *Green civil airway No. 6* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Palacios, Tex. (LFR) | Galveston, Tex. (LFR). | 1,200 |
| Galveston, Tex. (LFR) | Port Arthur (INT), Tex. | 1,400 |
| Port Arthur (INT), Tex. | Lake Charles, La. (LFR). | 1,500 |

2. Section 610.104 *Amber civil airway No. 4* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Waco, Tex. (LFR) | Clifton (INT), Tex. | 2,000 |
| Clifton (INT), Tex. | Stadium (INT), Tex. | 2,000 |
| Stadium (INT), Tex. | Fort Worth, Tex. (LFR). | 2,200 |

3. Section 610.301 *Red civil airway No. 1* is amended to eliminate:

| From— | To— | Minimum altitude |
|---|---|---|
| Denver, Colo. (LFR) | Int. S crs. Akron, Colo. (LFR) and 267° mag. brg. from Goodland, Kans. (LF/RBN). | 6,900 |
| Int. S crs. Akron, Colo. (LFR) and 267° mag. brg. from Goodland, Kans. (LF/RBN). | Goodland, Kans. (LF/RBN). | 6,000 |

4. Section 610.368 *Red civil airway No. 68* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Palo Pinto (INT), Tex. | Stadium (INT), Tex. | 2,500 |
| Stadium (INT), Tex. | Hensley (INT), Tex. | 2,700 |
| Hensley (INT), Tex. | Dallas, Tex. (LFR) | 2,100 |

5. Section 610.396 *Red civil airway No. 96* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Palacios, Tex. (LFR) | Arcola (INT), Tex. | 1,400 |
| Arcola (INT), Tex. | Houston, Tex. (LFR). | 1,200 |
| Houston, Tex. (LFR) | Fairbanks (INT), Tex. | 1,700 |
| Fairbanks (INT), Tex. | Bryan, Tex. (LFR) | 1,600 |

6. Section 610.605 *Blue civil airway No. 5* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Houston, Tex. (LFR) | Fairbanks (INT), Tex. | 1,700 |
| Fairbanks (INT), Tex. | Bryan, Tex. (LFR) | 1,600 |

7. Section 610.623 *Blue civil airway No. 23* is amended to eliminate:

| From— | To— | Minimum altitude |
|---|---|---|
| White Lake (INT), Mich. | Flint, Mich. (LFR) | 2,200 |

8. Section 610.624 *Blue civil airway No. 24* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| El Centro, Calif. (LFR). | Salton [1] (INT), Calif. | 9,000 |
| Salton (INT), Calif. | Palm Springs [2] (INT), Calif. | 12,000 |

[1] 12,000′—Minimum crossing altitude at Salton (INT), northbound.
[2] 12,000′—Minimum crossing altitude at Palm Springs (INT), northbound.

9. Section 610.647 *Blue civil airway No. 47* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Blackstone, Va. (LFR) | Gordonsville, [1] Va. (LFR). | 3,000 |

[1] 3,000′—Minimum crossing altitude at Gordonsville (LFR), northbound.

10. Section 610.662 *Blue civil airway No. 62* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Romulus, Mich. (LFR). | White Lake (INT), Mich. | 2,200 |
| White Lake (INT), Mich. | Flint, Mich. (ILS/LOM). | 2,300 |
| Flint, Mich. (ILS/LOM). | Saginaw, Mich. (LF/RBN). | 2,100 |

11. Section 610.679 *Blue civil airway No. 79* is added to read:

| From— | To— | Minimum altitude |
|---|---|---|
| Petersburg, Alaska (LFR). | Thane (INT), Alaska. | 8,000 |
| Thane (INT), Alaska. | Haines, Alaska (LF/RBN). | 9,000 |
| Haines, Alaska (LF/RBN). | U. S. Canadian Border. | 11,000 |

12. Section 610.6007 *VOR civil airway No. 7* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Tampa, Fla (VOR) | Homo [1] (INT), Fla | 1,400 |
| Homo [1] (INT), Fla | Cross City, Fla. (VOR). | [2] 3,000 |

[1] 3,000′—Minimum reception altitude.
[2] 1,400′—Minimum terrain clearance altitude.

13. Section 610.6008 *VOR civil airway No. 8* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Imperial, Nebr. (VOR) | Grand Island, Nebr. (VOR). | [1] 6,000 |
| Via S alter | Via S alter | [1] 8,500 |

[1] 4,200′—Minimum terrain clearance altitude.

14. Section 610.6015 *VOR civil airway No. 15* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Houston, Tex. (VOR) | College Station, Tex. (VOR). | 1,700 |

15. Section 610.6016 *VOR civil airway No. 16* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Fort Worth, Tex. (VOR): | Dallas, Tex. (VOR): | |
| Via direct or N alter | Via direct or N alter | 2,200 |
| Via S alter | Via S alter | 2,700 |
| Montebello, Va. (VOR) | Gordonsville, Va. (VOR). | 6,000 |
| Gordonsville, Va. (VOR). | Locustgrove [1] (INT), Va. | 3,000 |

[1] 2,000′—Minimum reception latitude.

16. Section 610.6022 *VOR civil airway No. 22* is amended to eliminate:

| From— | To— | Minimum altitude |
|---|---|---|
| New Orleans, La. (VOR). | Horn (INT), Miss | [1] 5,000 |
| Horn [2] (INT), Miss | Mobile, Ala. (VOR) | 2,000 |

[1] 1,600′—Minimum terrain clearance altitude.
[2] 5,000′—Minimum reception altitude.

17. Section 610.6039 *VOR civil airway No. 39* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Gordonsville, Va. (VOR). | Herndon, Va. (VOR) | 3,000 |

18. Section 610.6053 *VOR civil airway No. 53* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Tri-City, Tenn. (VOR) | Daley (INT), Ky | 6,200 |
| Daley [1] (INT), Ky | Lexington, Ky. (VOR). | 3,500 |

[1] 5,000′—Minimum crossing altitude at Daley (INT) southeast-bound.

19. Section 610.6066 *VOR civil airway No. 66* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Culberson, Tex. (VOR). | Orno (INT), Tex | 6,300 |
| Orno (INT), Tex | Midland, Tex. (VOR) | 8,000 |

20. Section 610.6075 *VOR civil airway No. 75* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Flat Rock, Va. (VOR) | Gordonsville, [1] Va. (VOR). | 2,000 |

[1] 3'000′—Minumum crossing altitude at Gordonsville (VOR), northwest-bound.

21. Section 610.6079 *VOR civil airway No. 79* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Culberson, Tex. (VOR). | Orno (INT), Tex | 6,300 |
| Orno (INT), Tex | Wink, Tex. (VOR) | 4,300 |

22. Section 610.6089 *VOR civil airway No. 89* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Rapid City, S. Dak. (VOR), direct or E alter. | Chadron, Nebr. (VOR), direct or E alter. | 5,600 |

23. Section 610.6107 *VOR civil airway No. 107* is amended to read in part:

| From— | To— | Minimum altitude |
|---|---|---|
| Coalinga, Calif. (VOR) | Oakland, Calif. [1] (VOR). | 7,000 |

[1] 2,500′—Minimum crossing altitude at Oakland (VOR), southeast-bound.

24. Section 610.6117 *VOR civil airway No. 117* is amended to eliminate:

| From— | To— | Minimum altitude |
|---|---|---|
| Waco, Tex. (VOR) | Morgan (INT), Tex | 2,000 |
| Morgan (INT), Tex | Mineral Wells, Tex. (VOR). | 2,300 |
| Mineral Wells, Tex. (VOR). | Bowie (INT), Tex | 2,300 |
| Bowie (INT), Tex | Ardmore, Okla. (VOR) | 2,600 |
| Ardmore, Okla. (VOR) | Oklahoma City, Okla. (VOR). | 2,700 |
| Via E alter | Via E alter | [1] 2,800 |

[1] 2,700′—Minimum terrain clearance altitude.

25. Section 610.6160 *VOR civil airway No. 160* is amended to eliminate:

| From— | To— | Minimum altitude |
|---|---|---|
| Harrisburg, Pa. (VOR) | Wernersville (INT), Pa. | 2,500 |

26. Section 610.6162 *VOR civil airway No. 162* is added to read:

| From— | To— | Minimum altitude |
|---|---|---|
| Harrisburg, Pa. (VOR) | Wernersville (INT), Pa. | 2,500 |

27. Section 610.6163 *VOR civil airway No. 163* is added to read:

| From— | To— | Minimum altitude |
|---|---|---|
| Waco, Tex. (VOR) | Morgan (INT), Tex | 2,000 |
| Morgan (INT), Tex | Mineral Wells, Tex (VOR). | 2,300 |
| Mineral Wells, Tex. (VOR). | Alvord (INT), Tex | 2,300 |
| Alvord (INT), Tex | Ardmore, Okla. (VOR) | 2,600 |
| Ardmore, Okla. (VOR) | Oklahoma City, Okla. (VOR). | 2,700 |
| Via E alter | Via E alter | [1] 2,800 |

[1] 2,700′—Minimum terrain clearance altitude.

(Sec. 205, 52 Stat. 984, as amended; 49 U. S. C. 425. Interpret or apply sec. 601, 52 Stat. 1007, as amended; 49 U. S. C. 551)

These rules shall become effective August 3, 1954.

[SEAL] S. A. KEMP,
*Acting Administrator of Civil Aeronautics.*

[F. R. Doc. 54–5422; Filed, July 19, 1954; 8:45 a. m.]

[Amdt. 97]

## PART 609—STANDARD INSTRUMENT APPROACH PROCEDURES

### PROCEDURE ALTERATIONS

The standard instrument approach procedure alterations appearing hereinafter are adopted to become effective when indicated in order to promote safety of the flying public. Compliance with the notice, procedures, and effective date provisions of section 4 of the Administrative Procedure Act would be impracticable and contrary to the public interest, and therefore is not required.

Part 609 is amended as follows:

1. The low frequency range procedures prescribed in § 609.6 are amended to read in part:

#### LFR STANDARD INSTRUMENT APPROACH PROCEDURE

Bearings, headings, and courses are magnetic. Distances are in statute miles unless otherwise indicated. Elevations and altitudes are in feet, MSL. Ceilings are in feet above airport elevation.
If an LFR instrument approach is conducted at the below named airport, it shall be in accordance with the following instrument approach procedure, unless an approach is conducted in accordance with a different procedure authorized by the Administrator for Civil Aeronautics for such airport. Initial approaches shall be made over specified routes. Minimum altitude(s) shall correspond with those established for en route operation in the particular area or as set forth below.

| City and State; airport name, elevation; facility; class and identification; procedure No.; effective date | Initial approach to facility from— | Course and distance | Minimum altitude (ft.) | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude over facility on final approach course (ft.) | Course and distance, facility to airport | Ceiling and visibility minimums | | | If visual contact not established at authorized landing minimums after passing facility within distance specified, or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Condition | Type aircraft: 75 m. p. h. or less | Type aircraft: More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| ALBANY, Ga.<br>Municipal, 196'<br>SBMRAZ-ABY<br>Procedure No. 1<br>July 21, 1954 | Albany VOR | 126—9.0 | 1,600 | N side E course:<br>090° outbound.<br>270° inbound.<br>1,400' within 25 miles. | 1,200 | 270—4.2 | T-dn<br>C-dn<br>S-dn<br>27<br>A-dn | 300-1<br>500-1<br><br>500-1<br>800-2 | 300-1<br>500-1½<br><br>500-1<br>800-2 | Within 4.2 miles, climb to 1,500' on W course within 25 miles. |
| HOULTON, MAINE<br>Municipal, 493'<br>BMRLZ-HUL<br>Procedure No. 1<br>July 24, 1954 | | | | E side N course:#<br>15° outbound.<br>195° inbound.<br>1,800' within 10 miles.<br>Beyond 10 miles not authorized. | 1,300 | 195—3.1 | T-dn<br>C-d<br>C-n<br>S-dn<br>19<br>A-dn | 500-1<br>700-1<br>700-1½<br><br>600-1<br>1,000-2 | 500-1<br>700-1½<br>800-2<br><br>600-1<br>1,000-2 | Within 3.1 miles, climb to 2,500' on S course within 15 miles. ADF procedure not authorized.<br>CAUTION: 870' hill with beacon light SE of airport, hill along E side of airport.<br>#Procedure turn E to avoid high terrain. |
| HOUSTON, TEX.<br>Municipal, 50'<br>SBRAZ-DTV-HOU<br>Procedure No. 1<br>July 24, 1954 | Intersection SE course HOU LFR and 039° M PER Rbn (final). | 309—5.0 | 700 | E side SE course:<br>129° outbound.<br>309° inbound.<br>1,200' within 15 miles.<br>Beyond 15 miles not authorized. | 700 | 309—2.2 | T-dn<br>C-dn<br>S-dn<br>30°<br>A-dn | 300-1<br>500-1<br><br>500-1<br>800-2 | 300-1<br>500-1½<br><br>500-1<br>800-2 | Within 2.2 miles, climb to 1,700' on NW course within 25 miles.<br>*590' per minute descent required at 120 miles per hour. |
| | Arcola FM | 038—16.0 | 1,200 | | | | | | | |
| | Houston FM | 129—9.0 | 1,300 | | | | | | | |
| | Houston VOR | 136—2.0 | 1,200 | | | | | | | |
| INDIANAPOLIS, IND.<br>Stout Field, 714'<br>SBRAZ-VDT-IND<br>Procedure No. 1<br>June 13, 1950 | PROCEDURE CANCELED JULY 16, 1954. | | | | | | | | | |
| JOPLIN, MO.<br>Joplin, 980'<br>BMRLZ-VDT-JLN<br>Procedure No. 1<br>January 8, 1954 | PROCEDURE CANCELED EFFECTIVE ON DATE FACILITY IS DECOMISSIONED. | | | | | | | | | |
| MILES CITY, MONT.<br>Municipal, 2,631'<br>SBMRAZ-DTV-MLS<br>Procedure No. 1<br>July 19, 1954 | MLS VOR | 180—1.5 | 4,500 | S side W course:<br>235° outbound.<br>055° inbound.<br>4,500' within 25 miles. | 3,500 | 055—2.2 | T-dn<br>C-d<br>C-n<br>A-dn | 300-1<br>500-1<br>500-1½<br>800-2 | 300-1<br>500-1½<br>500-1½<br>800-2 | Within 2.2 miles, climb to 4,300' on E course within 20 miles of MLS LFR. |

LFR STANDARD INSTRUMENT APPROACH PROCEDURE—Continued

| City and State; airport name, elevation; facility: class and identification; procedure No.; effective date | Initial approach to facility from— | Course and distance | Minimum altitude (ft.) | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude over facility on final approach course (ft.) | Course and distance, facility to airport | Ceiling and visibility minimums | | | If visual contact not established at authorized landing minimums after passing facility within distance specified, or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Condition | Type aircraft | | |
| | | | | | | | | 75 m. p. h. or less | More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| MONTPELIER, VT.<br>Barre-Montpelier, 1,149'<br>BMRLZ-VDT-MPV<br>Procedure No. 1<br>July 29, 1954 | Northfield Intersection (SE course Burlington LFR and SW course Montpelier LFR). | 050—12 | 4,500 | N side NE course:<br>050° outbound.<br>230° inbound.<br>4,000' within 10 miles. | 3,000 | 230—2.7 | T-d<br>T-n<br>C-d<br>C-n<br>A-dn | 800-2<br>1,400-2<br>1,400-2<br>1,900-3<br>2,000-3 | 800-2<br>1,400-2<br>1,400-2<br>1,900-3<br>2,000-3 | Within 2.7 miles, climb to 4,500' on SW course within 10 miles. ADF procedure not authorized. |
| SIOUX FALLS, S. DAK.<br>Municipal, 1,423'<br>SBRAZ-DTV-SUJ<br>Procedure No. 1<br>July 16, 1954 | SUJ VOR | 175—4.0 | 2,700 | W side of NW course:<br>297° outbound.<br>117° inbound.<br>2,700' within 10 miles.<br>2,800' within 25 miles. | 2,200 | 092—2.2 | T-dn<br>C-dn<br>A-dn | 300-1<br>500-1<br>800-2 | 300-1<br>500-1½<br>800-2 | Within 2.2 miles, climb to 3,000' NE course within 25 miles SUJ LFR. |
| TAMPA, FLA.<br>Peter O. Knight, 8'<br>SBRAZ-TPA<br>Restricted Procedure No. 1<br>July 15, 1954 | Tampa VOR | 094—16.0 | 1,500 | S side SW course:<br>210° outbound.<br>030° inbound.<br>1,200' within 15 miles.<br>Beyond 15 miles not authorized. | 700 | 055—2.7 | T-dn<br><br>C-dn<br>S-dn<br>3<br>A-dn | 500-1<br>*300-1<br>700-1<br><br>500-1<br>NA | 500-1<br>*300-1<br>700-2<br><br>500-2<br>NA | Within 2.7 miles, climb to 1,500' on NE course TPA-LFR within 10 miles.<br>NOTE: Weather and communications service not available at this airport. Flights should contact Tampa approach control at Tampa International Airport for ATC clearance.<br>CAUTION: Towers and buildings exceeding 400' immediately N of airport.<br>*Authorized on S and SW take-offs only. |
| VALPARAISO, FLA.<br>Eglin Air Force Base, 71'<br>MRLWZ-VPS<br>Procedure No. 1<br>July 21, 1954 | PROCEDURE CANCELED FOR CIVIL USE. | | | | | | | | | |
| WATERTOWN, S. DAK.<br>Watertown, 1,747'<br>BMRLZ-DTV-ATY<br>Procedure No. 1<br>August 1, 1952 | PROCEDURE CANCELED, EFFECTIVE ON DATE OF DECOMMISSIONING. | | | | | | | | | |

**2. The automatic direction finding procedures prescribed in § 609.8 are amended to read in part:**

ADF STANDARD INSTRUMENT APPROACH PROCEDURE

Bearings, headings, and courses are magnetic. Distances are in statute miles unless otherwise indicated. Elevations and latitudes are in feet, MSL. Ceilings are in feet above airport elevation.

If an ADF instrument approach is conducted at the below named airport, it shall be in accordance with the following instrument approach procedure, unless an approach is conducted in accordance with a different procedure authorized by the Administrator for Civil Aeronautics for such airport. Initial approaches shall be made over specified routes. Minimum altitude(s) shall correspond with those established for en route operation in the particular area or as set forth below.

| City and State; airport name, elevation; facility: class and identification; procedure No.; effective date | Initial approach to facility from— | Course and distance | Minimum altitude (ft.) | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude over facility on final approach course (ft.) | Course and distance, facility to airport | Ceiling and visibility minimums | | | If visual contact not established at authorized landing minimums after passing facility within distance specified, or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Condition | Type aircraft | | |
| | | | | | | | | 75 m. p. h. or less | More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 8 | 8 | 9 | 10 | 11 |
| BALTIMORE, MD.<br>Friendship International Airport, 146'<br>LOM-BA<br>Procedure No. 1<br>Feb. 1, 1953 | SUPERSEDED BY COMBINATION ILS-ADF PROCEDURE DATED JULY 29, 1954. | | | | | | | | | |

ADF STANDARD INSTRUMENT APPROACH PROCEDURE—Continued

| City and State; airport name, elevation; facility; class and identification; procedure No.; effective date | Initial approach to facility from— | Course and distance | Minimum altitude (ft.) | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude over facility on final approach course (ft.) | Course and distance, facility to airport | Ceiling and visibility minimums | | | If visual contact not established at authorized landing minimums after passing facility within distance specified, or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Condition | Type aircraft | | |
| | | | | | | | | 75 m. p. h. or less | More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| CHADRON, NEBR.<br>Municipal<br>BMH-CDR<br>Procedure No. 1<br>August 30, 1951<br>(ACA-1725A) | PROCEDURE CANCELED EFFECTIVE JULY 20, 1954. | | | | | | | | | |
| FARMINGDALE, N. Y.<br>Republic Aviation Airport, 82′<br>(Using Babylon MHW-FM BBN)<br>Procedure No. 1<br>July 29, 1954<br>Above procedure approved only during the hours that the control tower is in operation. | Mitchel LFR | 121—8 | 1,500 | E side of course:<br>166° outbound.<br>346° inbound.<br>1,500′ within 10 miles. | 800 | 346—4 | T-dn<br>C-dn<br>S-dn<br>1 and 32<br>A-dn | 300–1<br>500–1½<br><br>500–1<br>800–2 | 300–1<br>500–1½<br><br>500–1<br>800–2 | Within 4 miles of Babylon MHW, climb on a course of 350° to the NE course of the Mitchel LFR and proceed to the Mitchel radio range at 2,500′. Straight-in approach approved on a course of 350° to the Babylon MHW within 10 miles as determined by surveillance radar. |
| | Long Beach Intersection | 066—18 | 1,500 | | | | | | | |
| | Scotland Radiobeacon | 077—32 | 1,500 | | | | | | | |
| | St. James Intersection | 229—19 | 1,500 | | | | | | | |
| | Huntington Intersection | 179—14 | 1,500 | | | | | | | |
| | Radar terminal area transitions all directions. | Within 25 miles of IDL | 3,000 | | | | | | | |
| FORT WORTH, TEX.<br>Amon Carter Field, 568′<br>MHW-GPR<br>Procedure No. 2<br>July 24, 1954 | Fort Worth LFR | 107—20 | 2,700 | W side of course:<br>175° outbound.<br>355° inbound.<br>1,900′ within 15 miles.<br>Not authorized beyond 15 miles.* | 1,300 | 349—5.7 | T-dn<br>C-dn<br>S-dn<br>35<br>A-dn | 300–1<br>500–1<br><br>500–1<br>800–2 | 300–1<br>500–1½<br><br>500–1<br>800–2 | Within 5.7 miles, turn left, climb to 1,900′ on course of 309° within 15 miles of Amon Carter ILS-LOM, or when directed by ATC, climb to 2,200′ on course of 349° within 25 miles of Grand Prairie MHW.<br>*Procedure turn nonstandard due ATC. |
| | Haslet MHW | 126—23 | 1,900 | | | | | | | |
| | Amon Carter ILS LOM | 150—12 | 1,900 | | | | | | | |
| | Intersection E course FTW and N course DAL. | 204—17 | 1,900 | | | | | | | |
| | Dallas LFR | 238—12 | 1,900 | | | | | | | |
| | Duncanville MHW | 288—12 | 1,800 | | | | | | | |
| GOODLAND, KANS.<br>Municipal, 3,655′<br>BH-GLD<br>Procedure No. 1<br>(ACA-1725A)<br>October 20, 1953 | PROCEDURE CANCELED EFFECTIVE JULY 20, 1954. | | | | | | | | | |
| LAWRENCE MASS.<br>Municipal Airport, 165′<br>MHW-LWM<br>Procedure No. 1<br>July 24, 1954<br>Facility owned and operated by City of Lawrence. | ---------- | ---------- | ---------- | S side of course:<br>234° outbound.<br>054° inbound.<br>1,800′ within 7 miles.# | 1,300 | 054—3.2 | T-dn<br>C-dn<br>*S-dn<br>5<br>A-dn | 300–1<br>600–1<br><br>500–1<br>800–2 | 300–1<br>600–1½<br><br>500–1<br>800–2 | Within 3.2 miles make a left climbing turn to 2,000′ northwest bound on SE course of Concord LFR within 10 miles of Lawrence MHW facility.<br>*Deviation from criteria. Rate of descent exceeds standard. Runway 18–36 not authorized at night.<br>#Procedure turn limited to 7 miles due to limits of controlled airspace. |

3. The very high frequency omnirange procedures prescribed in § 609.9 (a) are amended to read in part:

VOR STANDARD INSTRUMENT APPROACH PROCEDURE

Bearings, headings, and courses are magnetic. Distances are in statute miles unless otherwise indicated. Elevations and altitudes are in feet, MSL. Ceilings are in feet above airport elevation.
If a VOR instrument approach is conducted at the below named airport, it shall be in accordance with the following instrument approach procedure, unless an approach is conducted in accordance with a different procedure authorized by the Administrator for Civil Aeronautics for such airport. Initial approaches shall be made over specified routes. Minimum altitude(s) shall correspond with those established for en route operation in the particular area or as set forth below.

| City and State; airport name, elevation; facility: class and identification; procedure No.; effective date | Initial approach to facility from— | Course and distance | Minimum altitude (ft.) | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude over facility on final approach course (ft.) | Course and distance, facility to airport | Ceiling and visibility minimums | | | If visual contact not established at authorized landing minimums after passing facility within distance specified, or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Condition | Type aircraft: 75 m. p. h. or less | Type aircraft: More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| ALBANY, GA.<br>Municipal, 196′<br>BVOR-ABY<br>Procedure No. 1<br>July 21, 1954 | Albany LFR | 306—9.0 | 1,600 | W side course:<br>333° outbound.<br>153° inbound.<br>1,500′ within 15 miles.<br>1,600′ within 20 and 25 miles. | 1,100 | 153—5.9 | T-dn<br>C-dn<br>S-dn<br>16<br>A-dn | 300-1<br>500-1<br><br>500-1<br>800-2 | 300-1<br>500-1½<br><br>500-1<br>800-2 | Within 5.9 miles, climb to 1,500′ on course of 153° within 25 miles of ABY-VOR.<br>CAUTION: Radio tower 607′ mean sea level 3 miles E of VOR. |
| BELMAR, N. J.<br>Monmouth County, 180′<br>BVOR-DME-OLT<br>Procedure No. 1<br>July 24, 1954 | Intersection NE course Millville LFR and 360° course to Colt's Neck VOR (final). | 360—11<br>To Monmouth Intersection.* | 1,500<br>800 | E side of course:<br>180° outbound.<br>360 inbound.<br>1,500′ within 10 miles of Monmouth Intersection. | 800 over Monmouth intersection.* | 360—2.0 from Monmouth Intersection.* | T-dn<br>C-dn<br>A-dn | 300-1<br>500-2<br>800-2 | ----------<br>----------<br>---------- | Within 2.0 miles after passing Monmouth Intersection* climb to 1,500′ on 360° course proceed to Colt's Neck VOR.<br>*Monmouth Intersection (Intersection NE course Lakehurst LFR and 360° course to Colt's Neck VOR). |
| Procedure No. 2<br>July 24, 1954 | Newark LOM<br>Intersection SW course La Guardia LFR and 180° course to Colt's Neck VOR (final). | 180—21<br>180—08 | 1,500<br>1,000 | Not authorized. | 1,000 | 180—7 | T-dn<br>C-dn<br>A-dn | 300-1<br>500-2<br>800-2 | ----------<br>----------<br>---------- | Within 7 miles after passing Colt's Neck VOR, climb to 1,500′ on course of 180° within 10 miles and return to Colt's Neck VOR. |
| CHILDRESS, TEX.<br>Municipal, 1,952′<br>BVOR-CDS<br>Procedure No. 1<br>July 22, 1954 | ---------- | ---------- | ---------- | E side of course:<br>171° outbound.<br>351° inbound.<br>3,100′ within 25 miles. | 2,600 | 351—3.7 | T-d<br>T-n<br>C-d<br>C-n<br>S-d<br>S-n<br>35<br>A-d<br>A-n | 300-1<br>NA<br>500-1<br>NA<br>500-1<br><br>NA<br>800-2<br>NA | 300-1<br>NA<br>500-1½<br>NA<br>500-1<br><br>NA<br>800-2<br>NA | Within 3.7 miles, climb to 3,200′ on course of 351° within 25 miles. |
| CUT BANK, MONT.<br>Cut Bank, 3,863′<br>BVOR-CTB<br>Procedure No. 1<br>July 30, 1954 | Cut Bank LFR | 018—1.7 | 6,000 | E side of course:<br>131° outbound.<br>311° inbound.<br>5,500′ within 25 miles. | 4,600 | 311—2.6 | T-dn<br>C-d<br>C-n<br>S-d<br>31<br>S-n<br>31<br>A-dn | 300-1<br>500-1<br>500-2<br><br>500-1<br><br>500-2<br>800-2 | 300-1<br>600-1½<br>600-2<br><br>500-1<br><br>500-2<br>800-2 | Within 2.6 miles, climb to 6,000′ on course of 327° outbound within 25 miles of CTB VOR. |
| GALVESTON, TEX.<br>Municipal, 7′<br>BVOR-GLS<br>Procedure No. 1<br>March 25, 1953 | PROCEDURE CANCELED JULY 21, 1954. | | | | | | | | | |
| MINOT, N. DAK.<br>Port O' Minot, 1,723′<br>BVOR-DTV-MOT<br>Procedure No. 1<br>July 17, 1954 | MOT LFR | 029—6.0 | 2,900 | N side of course:<br>061° outbound.<br>241° inbound.<br>2,700′ within 25 miles. | 2,200 | 241—5.6 | T-dn<br>C-dn<br>S-dn<br>25<br>A-dn | 300-1<br>500-1<br><br>500-1<br>800-2 | 300-1<br>500-1½<br><br>500-1<br>800-2 | Within 5.6 miles, climb to 3,400′ on course of 241° within 25 miles MOT VOR. |
| PADUCAH, KY.<br>Barkley, 405′<br>BVOR-VDT-PUK<br>Procedure No. 1<br>July 29, 1954 | Paducah Radiobeacon<br>Intersection E course advance LFR and course of 117° to Paducah VOR | 224—5<br>117—7 | 1,600<br>1,600 | E side of course:<br>221° outbound.<br>041° inbound.<br>1,600′ within 10 miles. | 1,100 | 041—4.8 | T-dn<br>C-dn<br>S-dn<br>4<br>A-dn | 300-1<br>500-1<br><br>500-1<br>800-2 | 300-1<br>500-1½<br><br>500-1½<br>800-2 | Within 4.8 miles, climb to 2,000′ on course of 039° within 25 miles of Paducah VOR. |

VOR STANDARD INSTRUMENT APPROACH PROCEDURE—Continued

| City and State; airport name, elevation; facility; class and identification; procedure No.; effective date | Initial approach to facility from— | Course and distance | Minimum altitude (ft.) | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude over facility on final approach course (ft.) | Course and distance, facility to airport | Ceiling and visibility minimums | | | If visual contact not established at authorized landing minimums after passing facility within distance specified, or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Condition | Type aircraft | | |
| | | | | | | | | 75 m. p. h. or less | More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| PRINCETON, MAINE<br>Municipal, 250'<br>VORW-PNN<br>Procedure No. 1<br>July 24, 1954 | Intersection NE course Bangor LFR and S course Houlton LFR (Topsfield Intersection). | 207—8 | 2,500 | W side:<br>344° outbound.<br>164° inbound.<br>2,500' within 10 miles. | 2,000 | 164—10.6 | T-d<br>S-d<br>15<br>C-d<br>A-d | 300-1<br><br>800-2<br>800-2<br>1,000-2 | 300-1<br><br>800-2<br>800-2<br>1,000-2 | Within 10.6 miles make a left climbing turn, climb to 2,500' returning to Princeton VOR and hold within 10 miles on course of 344° from Princeton VOR. |
| RAPID CITY, S. DAK.<br>Rapid City, 3,172'<br>BVOR-DTV-RAP<br>Procedure No. 1<br>July 17, 1954. | RAP LFR | 327—8.0 | 5,000 | E* side of course:<br>345° outbound.<br>165° inbound.<br>4,400' within 15 miles.<br>Not authorized beyond 15 miles. | 3,900 | 139—9.2 | T-dn<br>C-dn<br>A-dn | 300-1<br>700-2<br>800-2 | 300-1<br>700-2<br>800-2 | Within 9.2 miles, climb to 5,600' on 170° course from RAP VOR within 25 miles.<br>*Procedure turn nonstandard because of terrain W. |
| SANDFORD, MAINE<br>Municipal, 243'<br>BVOR-ENE<br>Procedure No. 1<br>July 24, 1954 | Portland LFR | 236—22 | 1,700 | N side of course:<br>81° outbound.<br>261° inbound.<br>1,500' within 10 miles. | 1,000 | 261—4.8 | T-d<br>S-d<br>26<br>C-d<br>A-d | 300-1<br><br>500-1<br>500-1<br>800-2 | 300-1<br><br>500-1<br>600-1½<br>800-2 | Within 4.8 miles make a climbing left turn. Climb to 1,700' on 212° course from Kennebunk VOR within 10 miles.<br>CAUTION: Hill 868' mean sea level 3.5 miles W of airport, tower 923' mean sea level 4 miles NW of airport. |
| SIOUX FALLS, S. DAK.<br>Municipal, 1,423'<br>BVOR-DTV-SUJ<br>Procedure No. 1<br>July 16, 1954 | SUJ LFR | 355—4.0 | 2,700 | W side of course:<br>327° outbound.<br>147° inbound.<br>2,700' within 25 miles. | 2,200 | 147—4.7 | T-dn<br>C-dn<br>S-dn<br>15<br>A-dn | 300-1<br>500-1<br><br>500-1<br>800-2 | 300-1<br>500-1½<br><br>500-1<br>800-2 | Within 4.7 miles, climb to 3,000' on course of 60° within 25 miles of VOR. |
| SPRINGFIELD, MO.<br>Springfield, 1,267'<br>BVOR-SGF<br>Procedure No. 1<br>July 15, 1954 | Springfield LFR | 049—7.0 | 2,300 | W side of course:<br>013° outbound.<br>193° inbound.<br>2,300' within 25 miles. | 1,800 | 193—7.8 | T-dn<br>C-dn<br>A-dn | 300-1<br>500-2<br>800-2 | 300-1<br>500-2<br>800-2 | Within 7.8 miles, climb to 2,700' on course 193° from the Springfield VOR within 25 miles. |
| VICHY, MO.<br>Vichy, 1,148'<br>BVOR-VIH<br>Procedure No. 1<br>July 15, 1954 | Vichy LFR | 012—4.5 | 2,200 | N side of course:<br>062° outbound.<br>242° inbound.<br>2,200' within 25 miles. | 1,700 | 242—3.3 | T-dn<br>C-dn<br>S-dn<br>22<br>A-dn | 300-1<br>500-1<br><br>500-1<br>800-2 | 300-1<br>500-1½<br><br>500-1<br>800-2 | Within 3.3 miles, climb to 2,600' on course 242° from the Vichy VOR within 25 miles. Runway lights on call from Vichy radio. |
| WATERTOWN, S. DAK.<br>Watertown, 1,747'<br>BVOR-DTV-ATY<br>Procedure No. 1<br>July 16, 1954 | | | | W side of course:<br>357° outbound.<br>177° inbound.<br>2,900' within 10 miles.<br>3,000' within 15 miles<br>3,200' within 25 miles. | 2,400 | 177—4.1 | T-dn<br>C-dn<br>S-dn<br>17<br>A-dn | 300-1<br>500-1<br><br>500-1<br>800-2 | 300-1<br>500-1½<br><br>500-1<br>800-2 | Within 4.1 miles, climb to 3,000' on course 177° within 25 miles of VOR. |
| WAUSAU, WIS.<br>Alexander Municipal, 1,205'<br>BVOR-BTV-AUW<br>Procedure No. 1<br>July 17, 1954 | | | | W side of course:<br>157° outbound.<br>337° inbound.<br>2,400' within 25 miles. | 1,900 | 337—5.6 | T-dn<br>C-d<br>C-n<br>S-d<br>S-n<br>31<br>A-dn | 300-1<br>700-1½<br>700-2<br>700-1½<br><br>700-2<br>800-2 | 300-1<br>700-2<br>700-2<br>700-2<br><br>700-2<br>800-2 | Within 5.6 miles, climb to 2,800' on outbound course 340° within 10 miles AUW VOR.<br>CAUTION: After takeoff NW left turn not authorized until 3,200' is reached. Radio tower on rib mountain 2,160' mean sea level 3 miles WSW of airport. Hills 1,700' mean sea level 2.1 miles W of final approach course. |

4. The very high frequency omnirange procedures prescribed in § 609.9 (b) are amended to read in part:

TVOR STANDARD INSTRUMENT APPROACH PROCEDURE

Bearings, headings, and courses are magnetic. Distances are in statute miles unless otherwise indicated. Elevations and altitudes are in feet, MSL. Ceilings are in feet above airport elevation.
If a TVOR instrument approach is conducted at the below named airport it shall be in accordance with the following instrument approach procedure, unless an approach is conducted in accordance with a different procedure authorized by the Administrator for Civil Aeronautics for such airport. Initial approaches shall be made over specified routes. Minimum altitude(s) shall correspond with those established for en route operation in the particular area or as set forth below.

| City and State; airport name, elevation; facility: class and identification, procedure No. (TVOR); effective date | Initial approach to facility from— | Course and distance | Minimum altitude (ft.) | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude over facility on final approach course (ft.) | Course and distance from int. runway center line extended and final course to approach end of runway | Ceiling and visibility minimums | | | If visual contact not established at TVOR, or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Condition[2] | Type aircraft | | |
| | | | | | | | | 75 m. p. h. or less | More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| AUGUSTA, MAINE<br>State Airport, 357'<br>BVOR-AUG<br>TVOR 17<br>July 24, 1954 | Augusta LFR | 076—2.3 | 1,700 | W side of course:<br>348° outbound.<br>168° inbound.<br>1,800' within 10 miles. | 1,100 | 171—1.0 | T-d<br>T-n<br>C-d<br>C-n<br>S-dn<br>17<br>A-dn | 400-1<br>500-1<br>700-1<br>700-1½<br><br>700-1<br>800-2 | 400-1<br>500-1<br>700-1½<br>700-1½<br><br>700-1<br>800-2 | Make a climbing right turn to 1,800' outbound on course 232° from Augusta VOR within 10 miles. |
| TVOR 35<br>July 24, 1954 | Augusta LFR | 076—2.3 | 1,700 | E side of course:<br>174° outbound.<br>354° inbound.<br>1,600' within 10 miles. | 1,000 | 351—1.0 | T-d<br>T-n<br>C-d<br>C-n<br>S-dn<br>35<br>A-dn | 400-1<br>500-1<br>600-1<br>600-1½<br><br>600-1<br>800-2 | 400-1<br>500-1<br>600-1½<br>600-1½<br><br>600-1<br>800-2 | Make a climbing right turn to 2,300' on course 070° from Augusta VOR within 10 miles. |
| TVOR 26<br>July 24, 1954 | Augusta LFR | 076—2.3 | 1,700 | N side of course:<br>080° outbound.<br>260° inbound.<br>1,600' within 10 miles. | 1,000 | 260° course parallel to runway. | T-d<br>T-n<br>C-d<br>C-n<br>S-dn<br>26<br>A-dn | 400-1<br>500-1<br>600-1<br>600-1½<br><br>600-1<br>800-2 | 400-1<br>500-1<br>600-1½<br>600-1½<br><br>NA<br>800-2 | Climb to 1,800' on course 232° from Augusta VOR within 10 miles. |

**5. The instrument landing system procedures prescribed in § 609.11 are amended to read in part:**

ILS STANDARD INSTRUMENT APPROACH PROCEDURE

Bearings, headings, and courses are magnetic. Distances are in statute miles unless otherwise indicated. Elevations and altitudes are in feet, MSL. Ceilings are in feet above airport elevation.
If an ILS instrument approach is conducted at the below named airport, it shall be in accordance with the following instrument approach procedure, unless an approach is conducted in accordance with a different procedure authorized by the Administrator for Civil Aeronautics for such airport. Initial approaches shall be made over specified routes. Minimum altitude(s) shall correspond with those established for en route operation in the particular area or as set forth below.

| City and State; airport name, elevation; facility class and identification; procedure No.; effective date | Transition to ILS | | | | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude at glide slope interception inbound (ft.) | Altitude of glide slope and distance to approach end of runway at— | | Ceiling and visibility minimums | | | If visual contact not established upon descent to authorized landing minimums or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | From— | To— | Course and distance | Minimum altitudes (ft.) | | | Outer marker | Middle marker | Condition | Type aircraft: 75 m.p.h. or less | Type aircraft: More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| BAKERSFIELD, CALIF.<br>Kern County No. 1, 515′<br>ILS-BFL<br>Procedure No. 1<br>July 15, 1954 | BFL LFR | SE course ILS. | 141—1.5 | 2,000 | S side S course:*<br>119° outbound.<br>299° inbound.<br>1,900′ within 10 miles of OM.<br>Beyond 10 miles not authorized. | 1,900 | 1,820—4.71 | 690—0.62 | T-dn<br>C-dn<br>S-dn<br>30<br>A-dn | 300–1<br>700–2<br><br>400–¾<br>800–2 | 300–1<br>700–2<br><br>400–¾<br>800–2 | Climb to 3,000′ on NW course BFL LFR within 25 miles or to 2,000′ on track of 319° from BFL VOR. Alternate missed approach, when directed by ATC, climb to 2,000′ on SW course of BFL LFR within 15 miles.<br>*Procedure turn S side for more favorable terrain.<br>CAUTION: Numerous unlighted TV receiving antennae in approach areas to runways 25, 30, 34. |
| | BFL VOR | SE course ILS. | 131—4.0 | 2,000 | | | | | | | | |
| BALTIMORE, MD.<br>Friendship International, 146′<br>ILS-BAL<br>LOM-BA<br>Procedure No. 1<br>Combination ILS-ADF<br>July 29, 1954 | Relay Intersection | LOM | 221—5 | 1,500 | S side W course:<br>281° outbound.<br>101° inbound.<br>1,500′ within 10 miles. | ILS 1,500<br>ADF 1,200<br>over LOM | 1,260—4.4 | 335—0.7 | T-dn<br>C-dn<br>S-dn<br>10<br>ILS<br>ADF<br>A-dn | 300–1<br>500–1<br><br><br>400–¾<br>500–1<br>800–2 | 300–1<br>500–1½<br><br><br>400–¾<br>500–1<br>800–2 | Within 4.4 miles after passing LOM (ADF), climb to 1,500′ on E course ILS or course 101° from LOM within 10 miles. |
| | Intersection NE course Arcola LFR and W course ILS or 101° bearing to LOM. | LOM | 101—23 | 1,700 | | | | | | | | |
| | Beltsville FM | LOM | 030—11 | 1,600 | | | | | | | | |
| | Lisbon Intersection | W course ILS. | 130—15 | 1,800 | | | | | | | | |
| | Lisbon Intersection | LOM | 122—20 | 1,800 | | | | | | | | |
| | Baltimore VOR | LOM | 254—5 | 1,500 | | | | | | | | |
| Procedure No. 2<br>Back course ILS<br>July 29, 1954<br>This procedure not approved for ADF approach. | Intersection E course Baltimore LFR and E course ILS. | Intersection S course BAL LFR and E course ILS. | 281—21 | 1,500 | N side E course:<br>101° outbound.<br>281° inbound.<br>1,500′ within 5 miles of intersection S course Baltimore LFR. | No glide slope or markers. Descend to authorized minimums after passing S course Baltimore LFR, distance to approach end of runway 28, 6.0 miles. | | | T-dn<br>C-dn<br>S-dn<br>28<br>A-dn | 300–1<br>500–1<br><br>500–1<br>800–2 | 300–1<br>500–1½<br><br>500–1<br>800–2 | Within 6.0 miles after passing S course Baltimore LFR, climb to 1,500′ on W course ILS within 10 miles of LOM. |
| BRISTOL, TENN.<br>Tri-City Airport, 1,524′<br>ILS-ITRI<br>Procedure No. 1<br>July 22, 1954 | Abingdon Intersection NE course TRI LFR and TRI VOR 030° radial. | ILS E course | 210—13 | 5,500 | N side ILS E course:<br>090° outbound.<br>270° inbound.<br>3,000′ within 5 miles of OM.# | 2,800 from within 5 mile of LOM.<br>5,500 from E of EME Intersection or MHW. | 2,740—4.4 | 1,750—0.7 | T-dn<br>C-d<br>C-n<br>S-d<br>S-n<br>27<br>A-dn | 300–1<br>700–1<br>700–1½<br>500–1<br><br>500–1<br>1,000–2 | 300–1<br>800–1½<br>800–2<br>800–1½<br><br>800–2<br>1,000–2 | Climb to 5,000′ on W course of ILS within 25 miles.<br>#Flights desiring more than 5 miles for procedure turn maintain 5,500′ and complete procedure turn within 15 miles E of Emmett Intersection or MHW.<br>*Final descent not to be initiated until definitely past Emmett intersection or MHW. Glide slope altitude 5,500′ over Emmett.<br>CAUTION: Abrupt changes in terrain elevations immediately adjacent to procedure areas. Also extreme turbulence may be expected during periods of high wind velocities.<br>##Emmett Intersection is intersection ILS E course and TRI VOR radial 352°. |
| | Bristol Intersection NE course TRI LFR and TRI VOR 344° radial or 340° from Emmett MHW. | ILS E course or EME MHW. | 160—5 | 5,500 | | | | | | | | |
| | Tri-City VOR | ILS E course | 340—3 | 5,500 | | | | | | | | |
| | Tri-City LFR | LOM | 129—1.5 | 3,000 | | | | | | | | |
| | Intersection SW course TRI LFR and E course ILS. | LOM | 090—3.5 | 3,000 | | | | | | | | |
| | Intersection SW course TRI LFR and E course ILS. | EME MHW or intersection.## | 090—13 | 5,500 | | | | | | | | |
| | Emmett MHW or (Emmett) Intersection## (final). | OM | 270—10 | On glide path or 2,740′* | | | | | | | | |

ILS STANDARD INSTRUMENT APPROACH PROCEDURE—Continued

| City and State; airport name, elevation; facility: class and identification; procedure No.; effective date | Transition to ILS | | | | Procedure turn (—) side of final approach course (outbound and inbound); altitudes; limiting distances | Minimum altitude at glide slope interception inbound (ft.) | Altitude of glide slope and distance to approach end of runway at— | | Ceiling and visibility minimums | | | If visual contact not established upon descent to authorized landing minimums or if landing not accomplished |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | From— | To— | Course and distance | Minimum altitudes (ft.) | | | Outer marker | Middle marker | Condition | Type aircraft: 75 m.p.h. or less | Type aircraft: More than 75 m. p. h. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| FORT WORTH, TEX. Amon Carter Field, 568' ILS-IACF LOM-AC Procedure No. 1 Combination ILS-ADF July 24, 1954 | Dallas LFR | LOM | 282—16 | 2,200 | N side NW course: 309° outbound. 129° inbound. 2,000' within 10 miles. Beyond 10 miles not authorized.* | ILS 2,000 ADF 2,000 over LOM | 2,000—5.3 | 770—0.60 | T-dn<br>C-dn | 300-1<br>500-1 | 300-1<br>500-1½ | Climb to 2,000' on SE course of ILS within 25 miles or when directed by ATC turn right, climb to 1,900' on track of 175° to and then from Grand Prairie MHW within 15 miles of Grand Prairie MHW, or climb to 1,900' via SE course of ILS and 238° from DAL-VOR within 10 miles of Hensley Intersection.<br>*Procedure turn nonstandard due ATC.<br>CAUTION: Radio tower 1,230' mean sea level located 5 miles ENE of outer marker. |
| | Intersection 193° radial from DAL-VOR and SE course ILS. | OM | 309—25 | 2,000 | | | | | S-dn<br>13<br>ILS | <br><br>400-¾ | <br><br>400-¾ | |
| | Duncanville MHW | LOM | 309—22 | 1,900 | | | | | ADF | 500-1 | 500-1 | |
| | Grand Prairie MHW | LOM | 330—12 | 1,900 | | | | | A-dn | 800-2 | 800-2 | |
| | Intersection S course FTW-LFR and W course DAL-LFR | LOM | 040—20 | 2,700 | | | | | | | | |
| | Fort Worth LFR | LOM | 071—14 | 1,900 | | | | | | | | |
| | Fort Worth VOR | OM | 069—23 | 2,000 | | | | | | | | |
| | Intersection N course FTW-LFR or 010° from FTW-VOR and NW course ILS. | OM | 129—24 | 1,900 | | | | | | | | |
| NEW BEDFORD, MASS. Municipal Airport, 79' ILS-I-EWB LMM-WB Procedure No. 1 Combination ILS-ADF August 1, 1954 | Intersection E course Providence LFR and SW course ILS. | OM | 233—1.3 | 1,400 | S side SW course: 233° outbound. 053° inbound. 1,400' within 10 miles of LMM. Not authorized beyond 10 miles. | ILS 1,400 ADF 800# over LMM | 1,240—4.5 | 265—0.7 | T-dn | 300-1 | 300-1 | Within 0.7 mile after passing LMM (ADF), make a climbing left turn as soon as practical, climb to 1,400' on SW course ILS or bearing 233° from LMM, hold on S side course within 10 miles of LMM.<br>#Descent to straight-in minimums authorized after passing OM. If OM not received, maintain 800' to LMM and circling minimums apply. |
| | Intersection E course Providence LFR and bearing 053° to LMM. | LMM | 053—2.0 | 1,400 | | | | | C-dn | 500-1 | 600-1½ | |
| | | | | | | | | | S-dn<br>5<br>ILS | <br><br>400-¾ | <br><br>400-¾ | |
| | | | | | | | | | #ADF | 500-1 | 500-1 | |
| | | | | | | | | | A-dn | 800-2 | 800-2 | |
| YAKIMA, WASH. Yakima, 1,077' ILS-IYKM Procedure No. 1 June 15, 1954 | Yakima LFR | LOM | 090—3.5 | 3,500 | S* side of course: 088° outbound. 268° inbound. 3,500' within 5 miles. 4,000' within 10 miles. 15, 20, and 25 miles not authorized. | 3,400 | 3,377—8.0 | 1,318—0.7 | #T-dn<br>C-d<br>C-n<br>S-dn | 400-1<br>800-2<br>800-2<br> | 400-1<br>800-2<br>1,000-2<br> | Climb on localizer course 268° outbound 088° inbound within 5 miles of station to 3,500'. All turns N side of course.<br>*Procedure turn S side of course for more favorable terrain.<br>#Take-off minimums 500-1 day, 800-2 night, runways 22-4 and 34. Runway 16 minimum 800-2. |
| | Yakima VOR | LOM | 115—4.5 | 3,500 | | | | | 27<br>A-dn | 400-1<br>800-2 | 400-1<br>1,000-2 | |
| | Selah Intersection | LOM | 096—11.0 | 3,500 | | | | | | | | |

These procedures shall become effective on the dates indicated in Column 1 of the procedures.

(Sec. 205, 52 Stat. 984, as amended; 49 U. S. C. 425. Interpret or apply sec. 601, 52 Stat. 1007, as amended; 49 U. S. C. 551)

[SEAL]

F. B. LEE,
*Administrator of Civil Aeronautics.*

[F. R. Doc. 54-5343; Filed, July 19, 1954; 8:45 a. m.]

# PROPOSED RULE MAKING

## DEPARTMENT OF AGRICULTURE

### Agricultural Marketing Service

### [ 7 CFR Part 907 ]

[Docket No. AO 212-A8]

HANDLING OF MILK IN MILWAUKEE, WIS., MARKETING AREA

NOTICE OF HEARING ON PROPOSED AMENDMENTS TO TENTATIVELY APPROVED MARKETING AGREEMENT AND TO ORDER, AS AMENDED

Pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U. S. C. 601 et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), notice is hereby given of a public hearing to be held at the Ambassador Hotel, 2308 West Wisconsin Avenue, Milwaukee, Wisconsin beginning at 1:00 p. m., c. s. t., July 23, 1954.

The hearing is for the purpose of receiving evidence with respect to economic and marketing conditions which relate to the handling of milk for the Milwaukee, Wisconsin, marketing area and to the proposed amendments set forth herein below, or modifications thereof, to the tentative marketing agreement as heretofore approved by the Secretary of Agriculture and to the order, as amended, regulating the handling of milk in the said marketing area. Consideration will be given also to the question of whether such conditions require emergency action with respect to any of all amendments deemed necessary as the result of the hearing. The amendments proposed have not received the approval of the Secretary of Agriculture.

The following amendments have been proposed:

By Milwaukee Cooperative Milk Producers:

1. Section 907.51 (a) be amended by changing the period at the end of the sentence to a comma and adding the following: "but no more than 24 cents shall be added to or subtracted from the Class I differential."

By Wern Farms, Wilke Dairy, Luick Dairy Company, Layton Park Dairy Company, Wm. H. Heinemann Creameries, Inc., Hawthorn Mellody Farms Dairy, Gehl Guernsey Farms, Inc., Borden Company—Gridley Division, Blochowiak Dairy Company:

2. Amend § 907.51 (b) to read as follows:

(b) *Class II milk.* The price for Class II milk shall be the basic formula price plus $0.50: *Provided,* That the price of producer milk received during May and June, frozen as cream and ultimately utilized as Class II milk shall be the basic formula price plus $0.35: *Provided also,* That such Class II price differential shall be adjusted by the amount of any adjustment made in the Class I price differential for the same month pursuant to the proviso of paragraph (a) of this section.

By the Dairy Division, Agricultural Marketing Service:

3. Make such other changes as may be required to make the entire marketing agreement and order conform with any amendments thereto that may result from this hearing.

Copies of this notice of hearing and of the said order, as amended, may be procured from the Market Administrator, 956 North 12th Street, Milwaukee 3, Wisconsin, or from the Hearing Clerk, Room 1353, South Building, United States Department of Agriculture, Washington 25, D. C., or may be there inspected.

Dated: July 15, 1954, at Washington, D. C.

[SEAL] ROY W. LENNARTSON, *Deputy Administrator.*

[F. R. Doc. 54-5501; Filed, July 16, 1954; 8:45 a. m.]

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### [ 7 CFR Part 913 ]

[Docket No. AO 23 A13]

HANDLING OF MILK IN GREATER KANSAS CITY MARKETING AREA

NOTICE OF HEARING ON PROPOSED AMENDMENTS TO TENTATIVE MARKETING AGREEMENT AND TO ORDER, AS AMENDED

Pursuant to the Agricultural Marketing Agreement Act of 1937, as amended (7 U. S. C. 601 et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), notice is hereby given of a public hearing to be held at the Hotel Bellerive, 214 E. Armour Boluevard, Kansas City, Missouri, beginning at 10:00 a. m., c. s. t., July 27, 1954, for the purpose of receiving evidence with respect to the proposed amendments hereinafter set forth, or appropriate modifications thereof, to the tentative marketing agreement heretofore approved by the Secretary of Agriculture and to the order, as amended, regulating the handling of milk in the Greater Kansas City marketing area. These proposed amendments have not received the approval of the Secretary of Agriculture.

Amendments to the order, as amended, for the Greater Kansas City marketing area have been proposed as follows:

By the Pure Milk Producers Association of Greater Kansas City, Inc.:

1. Add as § 913.16 the following:

§ 913.16 *Quota milk.* "Quota milk" means producer milk received by a handler or association at a pool plant, or milk diverted from a pool plant by a handler or association during any of the delivery period of January through August which is not in excess of each producer's daily average quota computed pursuant to § 913.65 multiplied by the number of days in such delivery period for which such producer delivered milk to such handler or association.

2. Add as § 913.17 the following:

§ 913.17 *Excess milk.* "Excess milk" means producer milk received by a handler or association at a pool plant, or received at a plant where diverted by a handler or association during any of the months of January through August which is in excess of quota milk received from each producer during such month, and shall include all milk received from producers for whom no daily average quota can be computed pursuant to § 913.65.

3. Add as § 913.22 (l) the following:

(l) On or before January 10th of each year shall prepare and in writing advise each producer who made deliveries during the previous September through December of his daily quota, if any, computed pursuant to § 913.65. On or before January 20th of each year all associations shall be advised in writing of quotas of all members of said association. On or before January 20th of each year all handlers shall be advised in writing of the daily quotas of all producers making deliveries to such handler.

4. Delete § 913.30 (a) and substitute therefor the following:

(a) The receipts at each plant of milk from each producer, the average butterfat test, the pounds of butterfat contained therein, the number of days on which milk was received from such producer and for the months of January through August the total pounds of quota milk and excess milk delivered by each producer.

5. Delete § 913.31 and substitute therefor the following:

§ 913.31 *Payroll reports.* On or before the 20th day of each delivery period, each handler operating a pool plant shall submit to the Market Administrator his producer payroll for receipts during the previous delivery period which shall show:

(a) The total pounds of milk, average butterfat test and pounds of butterfat received from each producer and cooperative association. The number of days on which milk was received from such producer, including for the delivery periods of January through August such producers deliveries of quota and excess milk.

(b) The amount of payment to each producer or cooperative association, and,

(c) The nature and amount of any deductions or charges involved in such payment.

6. Delete § 913.51 and substitute therefor the following:

§ 913.51 *Class prices.* Subject to the provisions of §§ 913.52 and 913.53, the minimum prices per hundredweight to be paid by each handler for milk received at his plant from producers during the delivery period shall be as follows:

(a) *Class I milk.* The basic formula price for the preceding delivery period

plus $1.45 during all delivery periods, plus or minus a "supply-demand" adjustment computed as follows:

(1) Divide the total gross volume of Class I milk (less inter-handler transfers) in the first and second delivery periods immediately preceding by the total receipts of producer milk for the same delivery periods, multiply the result by 100, and round to the nearest whole number. The result shall be known as the Class I utilization percentage.

(2) Compute a "net utilization percentage" by subtracting from the Class I utilization percentage computed pursuant to subparagraph (1) of this paragraph, the percentage shown below for the delivery period:

| Delivery period for which prices applies | Delivery periods used in computation | Percentage |
|---|---|---|
| January | November–December | 89 |
| February | December–January | 87 |
| March | January–February | 84 |
| April | February–March | 82 |
| May | March–April | 80 |
| June | April–May | 75 |
| July | May–June | 68 |
| August | June–July | 66 |
| September | July–August | 66 |
| October | August–September | 73 |
| November | September–October | 82 |
| December | October–November | 87 |

(3) For each plus percentage point in excess of 2 in the "net utilization percentage" the Class I price shall be increased 4 cents and for each minus percentage point in excess of 2 in the "net utilization percentage" the Class I price shall be decreased 4 cents: *Provided,* That in no event shall an adjustment made pursuant to this subparagraph exceed 23 cents per hundredweight.

7. Add as § 913.63 (d) the following:

(d) Diverted milk of producers in order to be pooled shall be delivered by a handler or cooperative to a pool plant on at least twenty days during each of the delivery periods of September, October, November, and December, and on at least fifteen days during each of the subsequent delivery periods of January, February, March, April, July, and August.

8. Add as § 913.65 the following:

§ 913.65 *Computation of daily average quota for each producer.* For the months of January through August of each year the market administrator shall compute a daily average quota for each producer as follows, subject to the rules set forth in § 913.66.

(a) Divide the total pounds of milk received by a handler(s) at a pool plant from such producer during the months of September through December immediately preceding by 122 if such producer delivered during at least 90 days during such period. The resulting figure shall be known as such producer's daily quota.

9. Add as § 913.66 the following:

§ 913.66 *Quota rules.* (a) A quota shall apply to deliveries of milk by the producer holding the producer permit issued by the appropriate health official for whose account that milk was delivered during the quota forming period.

(b) Quota may be transferred during the period of January through August by notifying the Market Administrator in writing before the last day of any delivery period that such quota is to be transferred to the person named in such notice only as follows:

(1) In the event of the death or entry into military service of a producer, the entire quota may be transferred to a member of such producer's immediate family who carries on the dairy operation.

(2) If a quota is held jointly and such joint holding is terminated on the basis of written notice to the market administrator from joint holders, the entire quota may be transferred to one of the joint holders, or pro-rated to the former joint holders if they continue dairy operations.

(c) A producer who ceases to deliver milk to a handler for more than 30 consecutive days shall forfeit his quota.

10. Delete § 913.71 and substitute therefor the following:

§ 913.71 *Computation of uniform price.* For each delivery period the market administrator shall compute the uniform price per hundredweight of milk received from producers as follows:

(a) Combine in one total the values computed pursuant to § 913.70 for all handlers who made reports prescribed in § 913.30 and who made the payments pursuant to §§ 913.80 and 913.84 for the preceding delivery period;

(b) Add the aggregate of the values of all allowable location differential adjustments to producers pursuant to § 913.81;

(c) Add an amount equal to one-half of the unobligated balance in the producer-settlement fund;

(d) Subtract for each one-tenth percent by which the average butterfat content of the milk included in these computations is greater than 3.8 percent, or add for each one-tenth percent that such average butterfat content is less than 3.8 percent, an amount computed by multiplying the butterfat differential computed pursuant to § 913.82 by the total hundredweight of such milk.

11. Add as § 913.72 the following:

§ 913.72 *Computation of uniform price.* For each of the delivery periods of September through December the market administrator shall compute the uniform price per hundredweight for all milk of 3.8 percent butterfat content received from producers as follows:

(a) Divide the aggregate value computed pursuant to § 913.71 by the total hundredweights of milk included in such computations, and,

(b) Subtract not less than 4 cents nor more than 5 cents. The resulting figure shall be the uniform price for milk of 3.8 percent butterfat content received at pool plant located less than 50 miles from the City Hall in Kansas City, Missouri.

12. Add as §913.73 the following:

§ 913.73 *Computation of uniform price for quota milk and excess milk.* For each of the months of January through August the market administrator shall compute the uniform price per hundredweight for quota milk and for excess milk, each of 3.8 percent of butterfat content, as follows:

(a) Compute the total value on a 3.8 percent butterfat basis of excess milk included in these computations by multiplying the hundredweights of such milk not in excess of the total quantity of Class II milk included in these computations by the price for Class II milk of 3.8 percent butterfat content, multiplying the hundredweight of such milk in excess of the total hundredweight of such Class II milk by the price for Class I milk of 3.8 percent butterfat content, and adding together the resulting amounts:

(b) Divide the total value of excess milk obtained in paragraph (a) of this section by the total hundredweights of such milk, and adjust to the nearest cent. The resulting figure shall be the uniform price for excess milk of 3.8 percent butterfat received from producers at pool plants located less than fifty miles from the City Hall in Kansas City, Missouri.

(c) Subtract the value of excess milk obtained in paragraph (a) of this section from the aggregate value of milk computed pursuant to § 913.71 and adjust by any amount involved in adjusting the uniform price of excess milk to the nearest cent;

(d) Divide the amount obtained in paragraph (c) of this section by the total hundredweights of quota milk included in these computations;

(e) Subtract not less than 4 cents nor more than 5 cents from the amount computed pursuant to paragraph (d) of this section. The resulting figure shall be the uniform price for quota milk of 3.8 percent butterfat content received from producers at pool plants located less than fifty miles from the City Hall in Kansas City, Missouri.

13. Delete § 913.80 (a) and substitute therefor the following:

(a) On or before the 12th day after the end of each delivery period during which the milk was received, to each producer for whom payment is not made pursuant to paragraph (c) of this section, at not less than the applicable uniform price(s) pursuant to § 913.72 or § 913.73 adjusted by the butterfat differential computed pursuant to § 913.82, subject to the location adjustment to producers pursuant to § 913.81 and less the amount of (1) the payments made pursuant to paragraph (b) of this section, (2) marketing service deductions pursuant to § 913.88 and (3) deductions authorized by the producer: *Provided,* That if by such date such handler has not received full payment for such delivery period pursuant to § 913.84 he may reduce his total payment to all producers uniformly by not less than the amount of reduction in payment from the market administrator; the handler shall, however, complete such payments not later than the date for making such payments pursuant to this paragraph next following receipt of the balance from the market administrator.

14. Delete § 913.80 (d) (2) and substitute therefor the following:

(2) The pounds per shipment, the total pounds of quota and excess milk if any and the average butterfat test of milk delivered by the producer;

15. Delete § 913.86.

By the Chapman Dairy Company:

16. Amend paragraph (b) of § 913.52 to provide that the butterfat differential for Class II milk shall be determined by multiplying by 1.15 the average daily wholesale price per pound of 92 score butter in the Chicago market, as reported by the Department of Agriculture, during the delivery period and dividing the result by 10.

By the Aines Farms Dairy Company, Country Club Dairy, Bordens Milk and Ice Cream Company, Meyer Dairy Company and Allvine Dairy Company:

17. Add as § 913.16 the following:

§ 913.16 *Distress milk.* "Distress milk" means producer milk which has been offered for sale by a handler pursuant to § 913.64, but which offer has not been accepted within the period of time specified for such acceptance, and which is thereafter received at and shipped from the approved plant of such handler to a non-pool plant more than fifty miles from the City Hall of Kansas City, Missouri.

18. Delete § 913.41 (b) and substitute therefor the following:

(b) Class II milk shall be all skim milk and butterfat; (1) used to produce butter, plain or sweetened condensed or evaporated milk, spray or roller process nonfat dry milk solids, powdered whole milk, ice cream, ice cream mix, frozen desserts, eggnog, aerated cream products with flavor or sweetening added in containers or dispensers under pressure, casein, margarine and cheese (including skim milk used to produce cottage cheese curd, but not including skim milk and butterfat used in creaming cottage cheese disposed of as creamed cottage cheese); (2) used for starter churning, wholesale baking and candy making purposes; (3) distress milk; (4) disposed of as livestock feed; (5) in skim milk dumped after prior notification to and opportunity for verification by the Market Administrator; and (6) in shrinkage not in excess of 2 percent of total receipts, other than receipts from pool plants of other handlers, of skim milk and butterfat, respectively.

19. Amend § 913.44 (a) by deleting the period at the end of said paragraph and substituting therefor a comma, and adding the words: "*Provided further,* That this paragraph shall not apply to milk defined as distress milk."

20. Amend § 913.44 (c) by deleting the period at the end of said paragraph and substituting therefor a comma, and adding to said paragraph the following: "*Provided,* That this paragraph shall not apply to milk defined as distress milk."

21. Amend § 913.44 (d) by deleting the period at the end of said paragraph and substituting therefor a comma, and adding to said paragraph the words: "*Provided,* That this paragraph shall not apply to milk defined as distress milk."

22. Delete § 913.51 (b) and substitute therefor the following:

(b) *Class II milk.* The price per hundredweight shall be the average of the prices reported to have been paid or to be paid, f. o. b. plant, for ungraded milk of 3.8 percent butterfat content received from farmers during the month at the following plants, excluding the plant paying the lowest price, for which prices have been reported to the market administrator or the United States Department of Agriculture:

*Present Operator and Location*

The Borden Co., Fort Scott, Kans.
The Pet Milk Co., Iola, Kans.
Milk Producers Marketing Co., Kansas City, Kans.
Central Farm Products Co., Trenton, Mo.
Concordia Creamery Co., Concordia, Mo.

23. Amend § 913.51 by adding thereto the following:

(c) *Distress milk.* The price for distress milk shall be the Class II price less 30 cents per hundredweight.

24. Add as § 913.64 the following:

§ 913.64 *Distress milk.* (a) Any handler may offer to the market administrator, all handlers operating in the Greater Kansas City marketing area during the preceding delivery period, and manufacturing plants referred to in § 913.51, milk which the handler expects to have available for Class II usage.

(b) Such offer shall be made in writing by registered mail postmarked not less than seven days before such milk is available. Said offer shall state the specific days on which the milk will be available, the approximate amount of milk available on each of such days, the approximate butterfat content thereof, the terms of the sale, and the price at which such milk is offered, which price, however, shall be no higher than the last announced Class II price, f. o. b. handler's plant.

(c) Any responsible person who desires to accept an offer shall notify the offering handler of his acceptance of such offer at least two full days prior to the date on which the milk is available for purchase.

(d) If the offering handler refuses to sell such milk to a person accepting such offer, such milk shall not be classified as distress milk: *Provided, however,* That such refusal shall be subject to verification by the Market Administrator.

25. In the event producer proposals for the establishment of a quota and excess plan for disbursing pool proceeds to producers is adopted, then it is proposed to amend existing Federal Order No. 13, as amended, by deleting § 913.7 and substituting therefor the following section:

§ 913.7 *Producer.* "Producer" means any person other than a producer handler, who: (a) Produces milk under a dairy farm permit or rating issued by the applicable health authority of the marketing area for the production of milk to be used for consumption as milk in the marketing area on the dairy farm subject to the regular inspection of such authority all of which milk, exclusive of milk consumed on the dairy farm of producer, is (1) received at pool plant, or (2) caused to be diverted from a pool plant, to a non-pool plant by a handler or cooperative association for the account of such handler or cooperative association, or

(b) Produces milk acceptable to agencies of the U. S. Government for fluid consumption in its institutions or bases as Type I; Type II, No. 1; or Type III, No. 1, which is received at a pool plant supplying Class I milk to such an institution or base in the marketing area. This definition shall not include a person with respect to milk produced by him which is received by a handler who is subject to another Federal marketing order and who is partially exempted from this part pursuant to the provisions of § 913.62. As used in this part "dairy farm permit or rating" means one issued by the health authority charged with the inspection of milk for fluid consumption in the part of the marketing area where such milk is sold or disposed of, or was sold or disposed of before being diverted.

26. In the event producer proposals for the establishment of quota and excess plan for disbursing pool proceeds to producers is adopted, then the following amendment to the said quota and excess plan is proposed:

Delete § 913.65 as proposed by producers and substitute therefor the following:

§ 913.65 *Computation of daily base.* (a) Effective January 1, 1955, the daily average base of each producer who regularly delivered milk to a handler for sixty days or more during September through November of the next preceding calendar year shall be computed by the Market Administrator by dividing the total pounds of milk received by a handler from such producer during such months by the number of days within the period during which such producer made regular deliveries of milk in such months, or sixty, whichever is the greater, adjusted by the percentage that Class I sales of all approved plants was of total producer receipts during the period of September through November, plus 15 percentage points, but limited to 115 percent.

(b) The daily average base of each producer for whom no daily base may be established pursuant to paragraph (a) of this section shall be computed by the Market Administrator as follows:

(1) Multiply such producer's daily average deliveries of milk during the current month by the percentage that total deliveries of base milk in the current month by producers for whom daily bases are computed pursuant to paragraph (a) of this section are to total deliveries of milk in the current month by all producers; and

(2) Effective January 1, 1955, for the months of January through August only, divide the result obtained in subparagraph (1) of this paragraph by 1.5.

By the Bates County Milk Producers Association:

27. A proposal providing for deletion of the "supply-demand" adjustment under Order No. 13, as amended.

Delete § 913.51 (a) and substitute therefor the following:

(a) *Class I milk.* The basic formula price for the preceding delivery period plus $1.15 during each of the delivery

periods of April, May, June and July, and plus $1.45 during all other delivery periods.

By the Country Charm Dairy:

28. Amend § 913.41 (b) to include as Class II milk the milk and cream used in the manufacture of horse-radish.

By the Adams Dairy Company:

29. Add as § 913.41 (c) the following:

(c) *Class III milk.* "Class III milk" shall be all skim milk and butterfat offered for sale or transfer by a handler pursuant to § 913.64, and having not been accepted within the period of time specified for such acceptance, and is thereafter received at and shipped from the approved plant of said handler to a non-pool plant more than fifty miles from the city hall of Kansas City, Missouri.

30. Delete § 913.51 (b) and substitute therefor the following:

(b) *Class II milk.* The price per hundredweight shall be the average of the prices reported to have been paid or to be paid, f. o. b. plant, for ungraded milk of 3.8 percent butterfat content received from farmers during the month at the following plants, for which prices have been reported to the market administrator or the United States Department of Agriculture:

The Borden Co., Fort Scott, Kans.
Pet Milk Co., Iola, Kans.
Milk Producers Marketing, Kansas City, Kans.
Central Farm Products Co., Trenton, Mo.
Concordia Creamery Co., Concordia, Mo.

*Provided further,* That the plant paying the lowest price shall not be included in computing the above average prices.

31. Add as § 913.51 (c) the following:

(c) *Class III milk.* The price for Class III milk shall be the Class II price as computed in § 913.51 (b), less 30 cents per hundredweight.

32. Add as § 913.64 the following:

§ 913.64 *Class III milk.* (a) Any handler may offer for sale or transfer to the Market Administrator, any manufacturing plant referred to in § 913.51, and all handlers operating in the Greater Kansas City Marketing Area during the preceding delivery period, milk which the handler expects to have available for Class II usage.

(b) The said offer shall be in writing by registered mail postmarked not less than seven days before such milk is available and shall contain the following information:

(1) The specific days on which the milk will be available.

(2) The approximate amount of milk available on each of such days.

(3) The approximate butterfat content of the milk offered.

(4) The price at which such milk is offered, provided that such price shall not exceed the last announced Class II price, f. o. b. handler's plant.

(c) Any responsible person who desires to accept an offer shall notify his acceptance of such offer to the offering handler at least two days prior to the date on which the milk is available for purchase.

(d) The said milk shall not be classified as Class III if the offering handler refuses to sell such milk to a person who has accepted the offer, provided, however, that such refusal shall be subject to verification by the Market Administrator.

33. Amend § 913.44 (a) by deleting the period at the end of said paragraph and substituting therefor a comma, and adding the words: *"Provided further,* That this paragraph shall not apply to milk classified as Class III milk."

34. Amend § 913.44 (c) by deleting the period at the end of said paragraph and substituting therefor a comma, and adding the words: *"Provided further,* That this paragraph shall not apply to milk classified as Class III milk."

35. Amend § 913.44 (d) by deleting the period at the end of said paragraph and substituting therefor a comma, and adding the words: *"Provided further,* That this paragraph shall not apply to milk classified as Class III milk."

36. In the event producer proposals for the establishment of a Base and surplus plan for disbursing pool proceeds to producers is adopted, then it is proposed to amend existing Federal Order No. 13, as amended, by deleting § 913.7 and substituting therefor the following section:

§ 913.7 *Producer.* "Producer" means any person other than a producer-handler, who:

(a) Produces milk under a dairy farm permit or rating issued by the applicable health authority of the marketing area for the production of milk to be used for consumption as milk in the marketing area on the dairy farm subject to the regular inspection of such authority all of which milk, exclusive of milk consumed on the dairy farm of producer, is (1) received at a pool plant, or (2) caused to be diverted from a pool plant, to a non-pool plant by a handler or cooperative association for the account of such handler or cooperative association, or

(b) Produces milk acceptable to agencies of the United States Government for fluid consumption in its institutions or bases as Type I; Type II; No. 1; or Type III, No. 1, which is received at a pool plant supplying Class I milk to such an institution or base in the marketing area. This definition shall not include a person with respect to milk produced by him which is received by a handler who is subject to another Federal marketing order and who is partially exempted from this part pursuant to the provisions of § 913.62. As used in this part "dairy farm permit or rating" means one issued by the health authority charged with the inspection of milk for fluid consumption in the part of the marketing area where such milk is sold or disposed of, or was sold or disposed of before being diverted.

37. In the event producer proposals for the establishment of a Base and Surplus plan for disbursing pool proceeds to producers is adopted, then the following amendment to the said Base and Surplus plan is proposed:

Delete § 913.65 as proposed by producers and substitute therefor the following:

§ 913.65 *Computation of daily base.* (a) Effective January 1, 1955, the daily average base of each producer who regularly delivered milk to a handler for sixty days or more during September through December of the next preceding calendar year shall be computed by the Market Administrator by dividing the total pounds of milk received by a handler from such producer during such months by the number of days within the period during which such producer made regular deliveries of milk in such months, or sixty, whichever is the greater, adjusted by the percentage that Class I sales of all approved plants was of total producer receipts during the period of September through December plus 15 percentage points, but limited to 115 percent.

(b) The daily average base of each producer for whom no daily base may be established pursuant to paragraph (a) of this section shall be computed by the Market Administrator as follows:

(1) Multiply such producer's daily average deliveries of milk during the current month by the percentage that total deliveries of base milk in the current month by producers for whom daily bases are computed pursuant to paragraph (a) of this section are to total deliveries of milk in the current month by all producers; and

(2) Effective January 1, 1955, for the months of January through August only, divide the result obtained in subparagraph (1) of this paragraph by 1.5.

By the Dairy Division, Agricultural Marketing Service:

38. Make such changes as may be required to make the entire order, as amended, conform with any amendments thereto that may result from this hearing.

Copies of this notice of hearing and of the order, as amended, now in effect, may be procured from the Market Administrator, 3808 Broadway, 2d Floor, Kansas City 2, Missouri, or from the Hearing Clerk, Room 1353, South Building, United States Department of Agriculture, Washington 25, D. C. or may be there inspected.

Dated: July 15, 1954, at Washington, D. C.

[SEAL] ROY W. LENNARTSON,
*Deputy Administrator.*

[F. R. Doc. 54-5543; Filed, July 19, 1954; 8:53 a. m.]

## DEPARTMENT OF LABOR

### Wage and Hour Division

### [ 29 CFR Part 536 ]

DEFINITION OF "AREA OF PRODUCTION"

NOTICE OF ADOPTION OF PRESIDING OFFICER'S RECOMMENDATIONS AND DENIAL OF PETITIONS FOR AMENDMENT OF REGULATIONS

On February 21, 1951, there was published in the FEDERAL REGISTER (16 F. R. 1741) a notice of public hearing to be held beginning April 2, 1951, with respect to regulations, Part 536, defining "Area of Production" as used in sections 7 (c) and 13 (a) (10) of the Fair Labor Stand-

ards Act as amended, on the questions: (1) Whether any changes or modifications are required, and (2) what changes and modifications should be made if any are required.

Pursuant to that notice, the hearing was held before Nathan Rubinstein who was duly authorized to preside and to submit to the Administrator a report of the proceedings together with his recommendation as to the action to be taken thereon.

Thereafter, on June 9, 1954, on the basis of the entire record and supplementary studies in relation to questions raised at the hearing, the Presiding Officer submitted his "Report and Recommendations" to me. The following are the Presiding Officer's "Summary and Conclusions" and his "Recommendations":

*Summary and conclusions.* 1. The picture presented by the record is one of misunderstanding and confusion as to the purpose and scope of the statute, the authority of the Administrator, the effect of the existing regulations and the purpose, effect, and scope of the changes advocated at the hearing. Superimposed upon the background of confusion and misunderstanding were many sharp conflicts of interest, not only between labor and employers but also between different groups of employers—the cooperative against the independent, the employers in the high wage against the employers in the low wage areas, and employers who already have the exemption against those who do not.

2. Considerably less interest was evidenced in this hearing than in the previous hearings. Large segments of the major industry groups which employ approximately three-quarters of the employees who are affected by the definition, were not represented at the hearing.

3. Some of the definitions proposed at the hearing would include operations other than those enumerated in the law. Other proposals made would have the effect of extending exemption from the act's minimum wage requirements to activities for which only the overtime exemption was intended by the Congress. Such proposals are beyond the Administrator's authority.

4. The hearing established that many proposals were made to change the definition in order that the proponents might be protected against the eventuality of future need. In most such cases, the proponents admitted that there was no present need for amendment or change of the definitions.

5. In a few instances it appears that the present mileage tests were determined without benefit of data as to specific commodities. Such a result may have occurred in two types of situations: (1) That group of commodities characterized in the definition as "commodities not otherwise specified in this subsection" for which a general 20-mile distance test was established, and (2) new and small industries which either did not produce at all or had insufficient production volume at the time the distance test was established to provide any significant data. In appropriate instances of these kinds a change in the mileage requirements may be justified.

6. The record contains uncontroverted evidence of the discriminatory effects of the present definition of "area of production." Employers who may not avail themselves of the exemption provisions in sections 7 (c) and 13 (a) (10) of the act find themselves in direct competition with employers who may. Much of the testimony frankly recognized that discrimination is inherent in the statutory provisions. Some proposals were designed to avoid this discrimination by providing exemption for all or practically all employees in a particular industry or branch; others would have eliminated the discrimination by withholding the exemption from all employees. Some witnesses stated that it would not matter whether all competitors could take advantage of the exemption or not—the important consideration was that all should be treated alike. Other proposals were made which would have shifted the discriminatory effects of the definition from one group to another. Generally the evidence showed the results of such shifts would merely have been to make the exemption available to the group urging the particular proposal.

7. Many proposals made during the course of the hearing are substantially identical with proposals made by the same proponents in previous hearings before the Administrator and in some cases before committees of the Congress in connection with proposed amendments to the act. The reiteration of such previously rejected proposals is indicative both of the continuation of the problem and the difficulty despite years of experience and additional judicial review of achieving a new and satisfactory solution.

8. No change in the lines drawn by the previous definition which falls short of denying or granting the exemption to all employees in an industry can accomplish anything but a shifting of the discriminatory effect from one group to another. Moreover, the many attempts to draft revised and improved definitions, and the extensive studies made, have thus far proved unsuccessful in achieving a definition which is nondiscriminatory and also carries out the Congressional intent. The only previous definition which was successful to a considerable degree in minimizing inequities was declared invalid by the Supreme Court in the Holly Hill (Addison v. Holly Hill Fruit Products Co., 322 U. S. 607) decision.

9. The present definition accomplishes the statutory purpose more effectively than any definition proposed at the hearing. Changes in the present definition within the limitations imposed by the decision of the U. S. Supreme Court in the Holly Hill case would at best be only palliative in their effect. At worst, they would widen the existing areas of confusion and uncertainty and shift and intensify the inequitable effects. The only real and lasting solution to the problem is a legislative one.

*Recommendations.* 1. I recommend that no change be made in the present definition of "area of production", and, to the extent that the proposals made during the course of the proceeding constitute petitions for amendment of the regulations under § 536.3, I recommend that they be denied.

2. I recommend that the Administrator again represent to the Congress that revision of the statute is necessary to eliminate competitive inequities.

3. I recommend that the Administrator invite and give priority to petitions for a change in the distance test, under § 536.3 of the present regulations, from those industries which (1) had insufficient production volume at the time the distance test was established to provide any significant data, or (2) perform operations on that group of commodities included in the "not otherwise specified" category of the definition.

I have reviewed and approve the report and recommendations of the presiding officer. Accordingly, notice is hereby given that I adopt the recommendations of the presiding officer set forth above.

Copies of the complete "Report and Recommendations of the Presiding Officer" may be obtained in Room 5332, United States Department of Labor, Fourteenth Street and Constitution Avenue NW., Washington 25, D. C.

Signed at Washington, D. C., this 16th day of July 1954.

WM. R. MCCOMB,
*Administrator,*
*Wage and Hour Division.*

[F. R. Doc. 54–5577; Filed, July 19, 1954; 8:58 a. m.]

## FEDERAL COMMUNICATIONS COMMISSION

### [ 47 CFR Part 41 ]

[Docket No. 11107]

TELEGRAPH AND TELEPHONE FRANKS

RECORDS TO BE MAINTAINED AND REPORTS TO BE FILED

1. American Telephone and Telegraph Company, on behalf of all Bell System operating companies, has filed a petition with the Commission requesting that paragraph (b) of § 41.31 in Part 41 of its rules be amended with respect to free or concession service granted to officers, agents, or employees of common carriers subject to the act ". . . to eliminate the requirement of the maintenance of records of personal calls from telephone company official stations." It is alleged in the petition that at many locations there is no requirement for traffic operating purposes or accounting purposes to make records of calls from company offices, particularly in respect to short-haul calls. The petitioner maintains that whatever information is needed for these purposes can be obtained by company studies as the need arises. It states further that the only practicable methods to maintain a record of the number of personal calls made from office telephones are (a) to make toll tickets or (b) to have recorded on tape (where automatic message accounting procedures are followed) all of the calls from office telephones. Identification of personal calls for the purposes of the requirements of Part 41 is then obtained by referring the tickets or other records

to the employees. The elimination of the necessity of writing toll tickets or the making of a record on AMA tape would result in substantial economies, according to the petitioner, and it adds that if and when a need should arise for the information of which records are presently to be maintained pursuant to paragraph (b) of § 41.31 of the Commission's rules, studies such as are made by the Bell System companies for their own traffic and accounting purposes could likewise be made for the Commission's purposes.

2. The petitioner requests the Commission to amend paragraph (b) of § 41.31 in the form set forth in its petition ". . . or to make such other amendment of its rules as the Commission may deem more appropriate . . .". Accordingly, the Commission proposes that paragraph (b) of § 41.31 be amended to read as follows:

(b) With respect to the communications referred to in § 41.13 every carrier subject to the act shall maintain its records in such a manner as to show the number of each class of such communications handled free of charge: *Provided,* That with respect to personal telephone calls of officers, agents, or employees of common carriers subject to the act made free of charge or at reduced rates from telephone company official stations it shall be sufficient, in lieu of such record maintenance, if the carrier be at all times prepared, upon appropriate request, to make studies which will show the number of each class of such communications handled free of charge or at reduced rates.

3. The proposed amendment is issued under authority of sections 4 (i), 210 and 220 of the Communications Act of 1934, as amended.

4. Any interested party who is of the opinion that the proposed amendment should not be adopted or should not be adopted in the manner proposed herein, may file with the Commission on or before August 13, 1954, a statement or brief setting forth his comments. Comments in support of the proposed amendment may also be filed on or before the same date. Comments or briefs in reply to the original comments may be filed within ten days from the last day for filing said original comments. No additional comments may be filed unless (1) specifically requested by the Commission or (2) good cause for the filing of such additional comments is established. The Commission will consider all such comments that are presented before taking action in the matter and, if any comments are submitted which appear to warrant the holding of oral argument, notice of time and place of such argument will be given.

5. In accordance with the provisions of § 1.764 of the Commission's rules and regulations, an original and fourteen copies of all statements and briefs filed shall be furnished to the Commission.

Adopted: July 14, 1954.

Released: July 15, 1954.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] MARY JANE MORRIS,
*Secretary.*

[F. R. Doc. 54-5544; Filed, July 19, 1954; 8:53 a. m.]

# NOTICES

## POST OFFICE DEPARTMENT

DECENTRALIZATION OF POST OFFICE OPERATIONS, EMBRACING STATES OF IDAHO, MONTANA, OREGON, WASHINGTON, AND TERRITORY OF ALASKA, AND ESTABLISHMENT OF REGIONAL HEADQUARTERS AT PORTLAND, OREG.

The following is the text of Order No. 55675, dated July 5, 1954, relating to the decentralization of post office operations:

Pursuant to the authority of section 1 (b) of Reorganization Plan No. 3 of 1949, the following changes will become effective on July 12, 1954.

1. On the effective date there will be established a regional headquarters at Portland, Oregon, under a Regional Operations Manager. Geographically this region will embrace the States of Idaho, Montana, Oregon and Washington and the Territory of Alaska. The Regional Operations Manager will be responsible to the Assistant Postmaster General, Bureau of Post Office Operations, for the direction of post office operations in this region. The Regional Operations Manager will also be subject to all policies affecting regional operations prescribed by the Department in Washington. There will also be a Regional Controller in the regional office who, for the time being, will be responsible to the Controller. The Regional Personnel Manager will be administratively responsible to the Regional Operations Manager insofar as Bureau of Operations activities are concerned, and functionally to the Assistant Postmaster General—Personnel. Functions, such as those listed below, which were formerly discharged by various headquarters bureaus and offices in Washington, will now be discharged by the regional staff.

A. Personnel functions, including such items as recruitment, selection and placement of personnel; training activities; labor relations, safety and health programs; classification of positions; awards and efficiency rating systems; review and disposition of disciplinary actions; and liaison with the Civil Service Commission in the region.

B. Service functions, including recommendations to the Department for the establishment or discontinuance of post offices, classified stations and branches; approval of requests for allowances of funds; maintenance of high standards of service in all post offices; and effective control of costs.

C. Industrial engineering functions, including administration of cost reduction programs; improvement in work methods; endorsement of requests for capital expenditures; maintenance of work standards; layout of facilities; provision of work simplification methods and training; and development of systems and procedures, other than accounting and fiscal procedures.

D. Controller functions including the direction of accounting, budget and cost analysis activities.

E. Public information functions, including encouragement of public cooperation and participation in improving postal methods; and maintaining good relations with federal, state, and municipal officials.

2. Bureaus and offices other than the following are unaffected by this order:

A. Bureau of Operations.
B. Bureau of Personnel.
C. Bureau of Controller.

All other bureaus and offices, however, are expected to coordinate and cooperate with this new regional organization. Decentralization of other departmental functions and the placing of activities already decentralized into the regional organization will be carried forward as soon as possible. Orders effectuating these changes will be issued from time to time.

3. The region will be divided into six districts. All postmasters in each district will report directly to their district manager.

4. Previous orders or instructions concerning the routing of communications from postmasters to the above-mentioned bureaus in Washington are hereby superseded. All communications with respect to the functions set forth in this order will be directed to the appropriate district manager, with the exceptions of monthly and quarterly accounts, which will continue to be routed as at present.

5. District headquarters cities, and the jurisdiction of each district, are as follows:

DISTRICT NO. 1

PORTLAND, OREGON

Oregon counties: Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill.

Washington counties: Clark, Cowlitz, Wahkiakum.

DISTRICT NO. 2

ANCHORAGE, ALASKA

All post offices located in the territory of Alaska.

DISTRICT NO. 3

SEATTLE, WASHINGTON

Washington counties: Chelan, Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Klickitat, Lewis, Mason, Pacific, Pierce, San Juan, Skagit, Skamania, Snohomish, Thurston, Whatcom, Yakima.

DISTRICT No. 4

SPOKANE, WASHINGTON

Idaho counties: Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, Shoshone.
Washington counties: Adams, Asotin, Benton, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Lincoln, Okanagan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman.

DISTRICT No. 5

BUTTE, MONTANA

All post offices located in the State of Montana.

DISTRICT No. 6

BOISE, IDAHO

Idaho counties: Ada, Adams, Bannock, Bear Lake, Bingham, Blaine, Boise, Bonneville, Butte, Camas, Canyon, Caribou, Cassia, Clark, Custer, Elmore, Franklin, Fremont, Gem, Gooding, Jefferson, Jerome, Lemhi, Lincoln, Madison, Minidoka, Oneida, Owyhee, Payette, Power, Teton, Twin Falls, Valley, Washington.
Oregon counties: Baker, Grant, Harney, Malheur.

6. District Managers will be designated in a separate announcement. They will act for and be responsible to the Regional Operations Manager on post office matters within their Districts. Each District Manager will be responsible for functions delegated to him by the Regional Operations Manager, including such things as: Making major operating decisions within his District; recommending action on all supervisory appointments; recommending action on requests for funds; advising Regional Operations Manager on District matters and conditions; carrying out regional policies in the District; interpreting departmental and regional policies and recommending changes; coordinating with other bureaus and government agencies in the District; taking necessary actions on complaints; directing the control of expenditures in the District; and maintaining essential records.

[SEAL] ABE MCGREGOR GOFF,
*The Solicitor.*

[F. R. Doc. 54-5520; Filed, July 19, 1954; 8:48 a. m.]

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ASSISTANT POSTMASTER GENERAL IN CHARGE OF BUREAU OF FINANCE

DELEGATION OF AUTHORITY TO DESIGNATE DEPARTMENTAL DISBURSING OFFICER

The following is the text of Order of the Postmaster General No. 55676, dated June 30, 1954:

The text added to the Postal Laws and Regulations of 1948, by Order No. 44573, dated November 21, 1950 (15 F. R. 8165, amending § 1.12 of Title 39, Code of Federal Regulations) is amended to read as follows:

Authority is hereby delegated to the Assistant Postmaster General in charge of the Bureau of Finance, to designate a Departmental Disbursing Officer to sign all checks on the consolidated checking account symbol 47-001, of the Postmaster General.

[SEAL] ABE MCGREGOR GOFF,
*The Solicitor.*

[F. R. Doc. 54-5521; Filed, July 19, 1954; 8:49 a. m.]

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REGIONAL HEADQUARTERS, DALLAS, TEX.

CHANGE OF LISTING OF ELLIS COUNTY FROM DISTRICT 5 TO DISTRICT 1

Order of the Postmaster General No. 55671, dated June 28, 1954, amended Order No. 55650, dated June 7, 1954 (19 F. R. 3970), to change the listing of Ellis County from District 5, with headquarters at Houston, Tex., to District 1 with headquarters at Dallas. Therefore, all communications affecting Ellis County with respect to functions set forth in Order 55650, should be directed to the District Manager, District 1, Dallas, Tex.

[SEAL] ABE MCGREGOR GOFF,
*The Solicitor.*

[F. R. Doc. 54-5522; Filed, July 19, 1954; 8:49 a. m.]

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# DEPARTMENT OF THE INTERIOR

## Bureau of Land Management

ALASKA

AIR NAVIGATION SITE WITHDRAWAL NO. 6

JULY 13, 1954.

Notice of the proposed withdrawal was published in the FEDERAL REGISTER April 14, 1954 (F. R. Doc 54-2790) and no protest was filed within 30 days thereafter.

By virtue of the authority contained in section 4 of the Act of May 24, 1928 (45 Stat. 729; 49 U. S. C. 214), and pursuant to section 2.22 (2) of Delegation Order No. 427 of August 16, 1950 (15 F. R. 5641), it is ordered as follows:

Subject to valid existing rights, the "tract of land referred to as Swift River VHF Repeater Station lying in the 4th Judicial Division, Territory of Alaska, on the north bank of the Kuskokwim River, 9 miles airline distance up river from the village of Stony River and 1500 feet downstream from the mouth of a small creek on the north bank of the Kuskokwim and at approximate latitude 61° 51′ N. and longitude 156° 24′ W.," and more particularly described below by metes and bounds, is hereby withdrawn from all forms of appropriation under the public land laws, and reserved for the use of the Civil Aeronautics Administration, Department of Commerce, in the maintenance of air navigation facilities, the reservation to be known as Air Navigation Site Withdrawal No. 6, Alaska:

From the latitude and longitude described above, go—

North 5,000 feet,
N. 30° 00′ E. 3,300 feet,
East 3,500 feet,
South 4,000 feet,
S. 30° 00′ W. 2,900 feet, approximately, to the north bank of the Kuskokwim River and thence along the meander of said north bank,
Southwesterly 4,150 feet, approximately, to the point of beginning.

The tract described contains 713.42 acres, more or less. All bearings are true.

The purpose of the withdrawal is for the maintenance of air navigation facilities.

It is intended that the public land described herein shall be returned to the administration of the Department of the Interior when it is no longer needed for the purpose for which it is reserved.

LOWELL M. PUCKETT,
*Area Administrator,*
*Area 4, Alaska.*

[F. R. Doc. 54-5505; Filed, July 19, 1954; 8:46 a. m.]

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ALASKA

AIR NAVIGATION SITE WITHDRAWAL NO. 7

JULY 13, 1954.

Notice of the proposed withdrawal was published in the FEDERAL REGISTER May 10, 1954, (F. R. Doc 54-3464) and no protest was filed within 30 days thereafter.

By virtue of the authority contained in section 4 of the Act of May 24, 1928 (45 Stat. 729; 49 U. S. C. 214), and pursuant to section 2.22 (2) of Delegation Order No. 427 of August 16, 1950 (15 F. R. 5641), it is ordered as follows:

Subject to valid existing rights, "the lands in the Third Judicial Division, Territory of Alaska, from station 1080+00 on the centerline of the Glenn Highway as it existed January 1, 1954, which point bears N. 70° 05′ E. 230 feet from the intersection of the Alaska Road Commission's Porcupine Camp Access Road centerline and the centerline of the Glenn Highway, go S. 28° 00′ E. 151.51 feet to a tacked hub on the southwardly right-of-way line of the Glenn Highway, which point is the Point-of-Beginning. Thence S. 28° 00′ E. 650.00 feet to a tacked hub marked Corner #2. Thence S. 62° 00′ W. 495.03 feet to a tacked hub marked Corner #3. Thence N. 28° W. 720.35 feet to a tacked hub marked Corner #4. Thence N. 70° 05′ E. 500.00 feet, along said southwardly line of said Glenn Highway right-of-way to the Point-of-Beginning, containing an area of 7.79 acres," are hereby withdrawn from all forms of appropriation under the public land laws, and reserved for the use of the Civil Aeronautics Administration, Department of Commerce, in the maintenance of air navigation facilities, the reservation to be known as Air Navigation Site Withdrawal No. 7, Alaska.

The purpose of the withdrawal: To establish an H-Marker installation consisting of an H-Marker Antenna, a combination Engine Generator Transmitter Building, and an access road. This will be a permanent installation and is to mark the intersection of the Gulkana and Northway Airways.

It is intended that the public land described herein shall be returned to the administration of the Department of the

Interior when it is no longer needed for the purpose for which it is reserved.

LOWELL M. PUCKETT,
*Area Administrator,*
*Area 4, Alaska.*

[F. R. Doc. 54-5506; Filed, July 19, 1954; 8:46 a. m.]

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[Misc. 63159]

ARIZONA AND UTAH

ORDER OPENING LANDS TO MINING LOCATION, ENTRY AND PATENT; AMENDMENT

JULY 14, 1954.

The order of the Director, Bureau of Land Management, of June 14, 1954, opening lands in Arizona and Utah to mining location, entry and patent, published in 19 F. R. 3638 on June 18, 1954 as F. R. Doc 54-4635 is hereby amended to the extent necessary to require that the stipulation referred to in paragraph one of the order be executed, acknowledged and filed, before location is made, in the Land Office, Bureau of Land Management at Phoenix, Arizona, for lands in Arizona, and at Salt Lake City, Utah, for lands in Utah, and be executed, acknowledged and recorded in the county records concurrently with and as a part of the notice of location.

W. G. GUERNSEY,
*Acting Director.*

[F. R. Doc. 54-5507; Filed, July 19, 1954; 8:46 a. m.]

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## Bureau of Reclamation

YAKIMA PROJECT, WASHINGTON

ORDER OF REVOCATION

DECEMBER 3, 1952.

Pursuant to the authority delegated by Departmental Order No. 2515 of April 7, 1949 (14 F. R. 1937), I hereby revoke Departmental Orders of December 22, 1905, January 26, 1906, August 4, 1910, September 18, 1916, and April 21, 1920, insofar as said orders affect the following described land: *Provided, however,* That such revocation shall not affect the withdrawal of any other lands by said orders or affect any other orders withdrawing or reserving the land hereinafter described:

WILLAMETTE MERIDIAN, WASHINGTON

T. 9 N., R. 26 E.,
Sec. 6, Lots 2, 3, and 4,
Sec. 8, SE¼, SE¼NE¼,
Sec. 18, NE¼,
Sec. 24, S½NW¼, NW¼SW¼.
T. 10 N., R. 26 E.,
Sec. 26, NW¼NW¼, E½E½,
Sec. 28, S½NE¼,
Sec. 32, E½NW¼.
T. 9 N., R. 27 E.,
Sec. 4, Lots 1, 2, 3, and 4, S½N½, SE¼,
Sec. 10, N½,
Sec. 22, S½,
Sec. 30, Lots 1 and 2, SE¼NW¼, SW¼NE¼.
T. 10 N., R. 27 E.,
Sec. 34, N½NW¼, SE¼NW¼.
T. 8 N., R. 28 E.,
Sec. 8, E½SW¼,
Sec. 18, SW¼SE¼.
T. 9 N., R. 28 E.,
Sec. 6, All,
Sec. 8, Lot 1, NW¼NE¼, S½NE¼, NW¼SE¼,
Sec. 18, S½SW¼,
Sec. 20, SW¼NW¼, NW¼SW¼, SE¼SW¼, S½SE¼,
Sec. 26, N½NW¼, SE¼NW¼,
Sec. 30, E½,
Sec. 32, All,
Sec. 34, SW¼NE¼, S½NW¼, S½.
T. 8 N., R. 29 E.,
Sec. 24, NW¼SW¼, S½SW¼.
T. 7 N., R. 30 E.,
Sec. 2, W½SW¼, NE¼SW¼, SW¼SE¼,
Sec. 12, S½NW¼, S½.
T. 8 N., R. 30 E.,
Sec. 30, Lots 2, 3 and 4, SW¼NE¼, SE¼NW¼, E½SW¼, SE¼,
Sec. 32, SW¼NE¼, N½NW¼, S½SW¼, SE¼.
T. 7 N., R. 31 E.,
Sec. 18, All.

The above areas contain approximately 7,569.45 acres.

G. W. LINEWEAVER,
*Assistant Commissioner.*

JUNE 21, 1954.

[Misc. 645690]

I concur. The records of the Bureau of Land Management will be noted accordingly.

1. The following-described lands released from withdrawal by this order shall not become subject to the initiation of any rights or to any disposition under the public-land laws until it is so provided by an order of classification to be issued by an authorized officer opening the lands to application under the Small Tract Act of June 1, 1938 (52 Stat. 609; 43 U. S. C. 682a) as amended, with a 91-day preference-right period for filing such applications by veterans of World War II and other qualified persons entitled to preference under the act of September 27, 1944 (58 Stat. 747; 43 U. S. C. 279-284) as amended:

WILLAMETTE MERIDIAN

T. 9 N., R. 28 E.,
Sec. 6, N½, SW¼, N½SE¼, SE¼SE¼,
Sec. 8, W½NE¼, SE¼NE¼, N½NW¼, W½SE¼NW¼, SE¼.

The areas described contain 969.62 acres.

2. The remaining lands released from withdrawal by this order are arid, lying in an area where the annual precipitation averages 7 inches. The soil varies from sand to light silt loam with rock outcrops. A light cover of grass and sagebrush is the dominant vegetative cover of the land, which makes it chiefly valuable for grazing. The topography is generally rough and broken. Any application that is filed will be considered on its merits.

3. This order shall not otherwise become effective to change the status of the lands referred to in paragraph 2 until 10:00 a. m. on the 35th day after the date of this order. At that time the said lands shall become subject to application, petition, location and selection under the applicable public land laws, subject to valid existing rights, the provisions of existing withdrawals, the requirements of applicable laws, and the 91-day preference-right filing period for veterans of World War II and others entitled to preference under the act of September 27, 1944 (58 Stat. 747; 43 U. S. C. 279-284) as amended.

4. Veteran's preference-right applications under the act of September 27, 1944 (58 Stat. 747; 43 U. S. C. 279-284) may be filed on or before 10:00 a. m., of the 35th day after the date of this order, and those covering the same land shall be treated as though simultaneously filed at that time. Applications filed under the act after that time and during the succeeding 91 days shall be considered in the order of filing. Applications by nonveterans under the public land laws, filed on or before 10:00 a. m., of the 126th day after the date of this order shall be treated as though simultaneously filed at that time, where the applications are for the same lands; otherwise, priority of filing shall govern.

Inquiries regarding the lands shall be addressed to the Manager, Land Office, Bureau of Land Management, Spokane, Washington.

EARL G. HARRINGTON,
*Acting Director,*
*Bureau of Land Management.*

[F. R. Doc. 54-5508; Filed, July 19, 1954; 8:46 a. m.]

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## Office of the Secretary

CAPE HATTERAS NATIONAL SEASHORE RECREATIONAL AREA, NORTH CAROLINA

ORDER DESIGNATING LANDS FOR HUNTING

Pursuant to section 3 (d) of the act of August 17, 1937 (50 Stat. 669), as amended by the act of June 29, 1940 (54 Stat. 702; 16 U. S. C., 1952 ed., sec. 459—459a-3), which provides that the Secretary of the Interior shall designate not more than 2,000 acres of certain lands within Cape Hatteras National Seashore Recreational Area upon which hunting shall be permitted, notice is hereby given that Federally owned lands within the following described areas of Cape Hatteras National Seashore Recreational Area shall be open to hunting:

On Hatteras Island, those strips of land between the villages of Salvo and Avon, Avon and Buxton, and between Frisco and Hatteras, said strips measuring 250 feet in width from the mean high-water mark on Pamlico Sound toward the Atlantic Ocean, containing a total of 500 acres, more or less;

On Bodie Island, an area of 1,500 acres, more or less, being bounded on the west by the mean high-water mark of Roanoke Sound, on the east by a line 2,000 feet west of and parallel to the highway, on the north by the north dike of the Goosewing Club property, on the south by the north boundary of the Dare County tract.

Provided, hunting on said lands shall be in accordance with applicable State and Federal laws.

A map depicting the foregoing areas and the portions thereof in Government ownership may be viewed by the public at the Office of the Superintendent, Cape Hatteras National Seashore Recreational Area, Manteo, North Carolina.

Issued this 14th day of July 1954.

RALPH A. TUDOR,
*Acting Secretary of the Interior.*

[F. R. Doc. 54-5509; Filed, July 19, 1954; 8:47 a. m.]

## DEPARTMENT OF LABOR

### Wage and Hour Division

LEARNER EMPLOYMENT CERTIFICATES

ISSUANCE TO VARIOUS INDUSTRIES

Notice is hereby given that pursuant to section 14 of the Fair Labor Standards Act of 1938, as amended (52 Stat. 1068, as amended; 29 U. S. C. and Sup. 214) and Part 522 of the regulations issued thereunder (29 CFR Part 522), special certificates authorizing the employment of learners at hourly wage rates lower than the minimum wage rates applicable under section 6 of the act have been issued to the firms listed below. The employment of learners under these certificates is limited to the terms and conditions therein contained and is subject to the provisions of Part 522. The effective and expiration dates, occupations, wage rates, number or proportion of learners, and learning period for certificates issued under the general learner regulations (§§ 522.1 to 522.14) are as indicated below; conditions provided in certificates issued under special industry regulations are as established in these regulations.

Single Pants, Shirts and Allied Garments, Women's Apparel, Sportswear and Other Odd Outerwear, Rainwear, Robes and Leather and Sheep-Lined Garments Divisions of the Apparel Industry Learner Regulations (29 CFR 522.160 to 522.168, as amended June 2, 1952, 17 F. R. 3818, and July 5, 1954, 19 F. R. 3326).

Cahaba Manufacturing Co., Centerville, Ala., effective 7–5–54 to 1–4–55; 25 learners for plant expansion purposes (children's shirts).

Connellsville Sportswear Co., South First Street, Connellsville, Pa., effective 7–10–54 to 7–9–55; 10 percent of the total number of factory production workers for normal labor turnover purposes (men's and boys' pants).

Dowling Textile Manufacturing Co., P. O. Box 389, McDonough, Ga., effective 7–5–54 to 7–4–55; 10 learners for normal labor turnover purposes (cotton service apparel).

Happ Bros. Co., Inc., Sparta, Ga., effective 6–24–54 to 6–23–55; 10 percent of the total number of factory production workers for normal labor turnover purposes (trousers).

Hollywood Corset Co., North Faulk Street, Athens, Tex., effective 7–16–54 to 7–15–55; 10 percent of the total number of factory production workers for normal labor turnover purposes (brassieres).

Hunter-Sadler Co., Tupelo, Miss., effective 7–16–54 to 7–15–55; 10 percent of the total number of factory production workers for normal labor turnover purposes (sport shirts and jackets).

Industrial Garment Manufacturing Co., 201 East Oak Street, Palestine, Tex., effective 7–2–54 to 7–1–55; 10 percent of the total number of factory production workers for normal labor turnover purposes (work pants).

Lanier Manufacturing Co., Easley, S. C., effective 6–28–54 to 6–27–55; 10 percent of the total number of factory production workers for normal labor turnover purposes (sport shirts).

Lehigh Garment Co., Inc., 201 Bridge Street, Jessup, Pa., effective 7–5–54 to 7–4–55; 6 learners for normal labor turnover purposes (children's outerwear).

Lillington Garment Co., Inc., Lillington, N. C., effective 7–5–54 to 1–4–55; 40 learners for expansion purposes (sport and utility shirts).

Main Dress Co., 348 Main Street, Luzerne, Pa., effective 7–10–54 to 7–9–55; 5 learners for normal labor turnover purposes (dresses and housecoats).

Mode O'Day Corp., 607 Main Street, Osawatomie, Kans., effective 7–13–54 to 7–12–55; 10 learners for normal labor turnover purposes (ladies' blouses).

Rainfair, Inc., Wynne, Ark., effective 7–5–54 to 7–4–55; 10 learners for normal labor turnover purposes (dress pants).

Rainfair, Inc., Wynne, Ark., effective 7–5–54 to 1–4–55; 10 learners for plant expansion purposes (dress pants).

Valley Modes, 210 North Valley Avenue, Olyphant, Pa., effective 7–1–54 to 6–30–55; 10 learners for normal labor turnover purposes (dresses).

Valley Modes, 210 North Valley Avenue, Olyphant, Pa., effective 7–1–54 to 12–31–54; 5 learners for expansion purposes (dresses).

West Union Garment Co., Inc., West Union W. Va., effective 7–2–54 to 7–1–55; 10 learners for normal labor turnover purposes (brassieres).

The Woolenwear Co., 417 South Center Street, Bloomington, Ill., effective 7–10–54 to 7–9–55; 10 learners for normal labor turnover purposes (jackets).

Glove Industry Learner Regulations (29 CFR 522.220 to 522.231, as amended July 13, 1953, 18 F. R. 3292).

Artcraft Co., Inc., Johnson City, Tenn., effective 7–13–54 to 7–12–55; 10 percent of the total number of machine stitchers, for normal labor turnover purposes (leather dress gloves).

Hosiery Industry Learner Regulations (29 CFR 522.40 to 522.46, as amended May 3, 1954, 19 F. R. 1761).

Acca Hosiery Mills, P. O. Box 4, Henderson, N. C., effective 7–5–54 to 1–4–55; 5 learners for expansion purposes.

Acca Hosiery Mills, P. O. Box 4, Henderson, N. C., effective 7–5–54 to 7–4–55; 5 learners for normal labor turnover purposes.

Wrenn Hosiery Co., 115 Liberty Drive, Thomasville, N. C., effective 7–18–54 to 7–17–55; 5 percent of the total number of factory production workers for normal labor turnover purposes.

Shoe Industry Learner Regulations (29 CFR 522.250 to 522.260, as amended March 17, 1952, 17 F. R. 1500).

Madye's, Inc., 15 East Concho Street, San Angelo, Tex., effective 7–5–54 to 7–4–55; 5 learners for normal labor turnover purposes (soft-sole scuffs).

Each certificate has been issued upon the employer's representation that employment of learners at subminimum rates is necessary in order to prevent curtailment of opportunities for employment, and that experienced workers for the learner occupations are not available. The certificates may be canceled in the manner provided in the regulations and as indicated in the certificates. Any person aggrieved by the issuance of any of these certificates may seek a review or reconsideration thereof within fifteen days after publication of this notice in the FEDERAL REGISTER pursuant to the provisions of Part 522.

Signed at Washington, D. C., this 6th day of July 1954.

MILTON BROOKE,
*Authorized Representative of the Administrator.*

[F. R. Doc. 54–5512; Filed, July 19, 1954; 8:47 a. m.]

## FEDERAL COMMUNICATIONS COMMISSION

[Docket No. 10911, 10959; FCC 54–888]

PHIL BIRD AND LAWTON BROADCASTING CO., INC.

ORDER SCHEDULING HEARING

In re applications of Phil Bird, Lawton, Oklahoma, Docket No. 10911, File No. BP–9018; Lawton Broadcasting Company, Inc., Lawton, Oklahoma, Docket No. 10959, File No. BP–8840; for construction permits.

At a session of the Federal Communications Commission held at its offices in Washington, D. C., on the 14th day of July 1954; and

The Commission having under consideration the above-entitled applications which were designated for hearing on February 17 and March 17, 1954, respectively; and

It appearing, That no date was previously scheduled by the Commission in the above-entitled proceeding;

*It is ordered,* That the hearing in the above-entitled proceeding be held at 10:00 a. m., September 28, 1954, in Washington, D. C.

Released: July 15, 1954.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] MARY JANE MORRIS,
*Secretary.*

[F. R. Doc. 54–5546; Filed, July 19, 1954; 8:53 a. m.]

## FEDERAL POWER COMMISSION

[Docket No. G–2471]

CITIES SERVICE GAS CO.

NOTICE OF APPLICATION

JULY 14, 1954.

Take notice that Cities Service Gas Company (Applicant), a Delaware corporation having its principal place of business in Oklahoma City, Oklahoma, filed on July 1, 1954, an application for a certificate of public convenience and necessity pursuant to section 7 of the Natural Gas Act, authorizing the construction and operation of facilities subject to the jurisdiction of the Commission and described as follows:

Construct a 26-inch gas pipeline approximately 7.5 miles, including a double 20-inch submerged crossing of the Kansas River, beginning at a point of connection with an existing 16-inch pipeline system in Johnson County, Kansas, and extending to a terminus in Wyandotte County, Kansas.

Applicant proposes to construct and operate the described facilities for the purpose of providing additional capacity to (a) meet increasing firm peak day demands on its own system and (b) to assist in solving a distribution problem confronting The Gas Service Company in the most economical manner for that company.

The application recites that the proposed facilities will enable Applicant to meet firm demands in the metropolitan Kansas City area which have increased

from 456,096 Mcf in 1954–55 to 495,707 Mcf in 1955–56.

The estimated overall capital cost of the facilities is $494,000 which will be paid for in part from an unsecured bank credit (Docket No. G–2149) arrangement, and in part out of treasury cash.

Protests or petitions to intervene may be filed with the Federal Power Commission, Washington, D. C., in accordance with the Commission's rules of practice and procedure (18 CFR 1.8 or 1.10) on or before the 4th day of August 1954. The application is on file with the Commission for public inspection.

[SEAL] LEON M. FUQUAY,
*Secretary.*

[F. R. Doc. 54–5527; Filed, July 19, 1954; 8:50 a. m.]

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[Docket No. G–2472]

TEXAS EASTERN TRANSMISSION CORP.

NOTICE OF APPLICATION

JULY 14, 1954.

Take notice that Texas Eastern Transmission Corporation (Applicant), a Delaware corporation, having its principal places of business at Shreveport, Louisiana, and Houston, Texas, filed on July 1, 1954, an application pursuant to section 7 of the Natural Gas Act for a certificate of public convenience and necessity authorizing Applicant to construct and operate:

A natural gas pipeline system consisting of approximately 26.5 miles of 16-inch pipeline extending from Applicant's Joaquin Compressor Station near Joaquin, Texas, to the Carthage Field in Panola County, Texas, and approximately 31.5 miles of 20-inch pipeline from the point of termination of said 16-inch pipeline in the Carthage Field to the terminus of Applicant's 24-inch pipeline near Longview, Texas, together with necessary appurtenances thereto.

The application recites the facilities proposed will enable Applicant to transfer gas from one section of the system to another on a firm basis, and so as to best fit its own operating conditions without being dependent on operating conditions on United Gas' system.

The estimated capital cost of the facilities described above is $3,269,000 and will be defrayed from funds on hand available to Applicant.

Protests or petitions to intervene may be filed with the Federal Power Commission, Washington 25, D. C., in accordance with the rules of practice and procedure (18 CFR 1.8 or 1.10) on or before the 4th day of August 1954.

The application is on file with the Commission for public inspection.

[SEAL] LEON M. FUQUAY,
*Secretary.*

[F. R. Doc. 54–5528; Filed, July 19, 1954; 8:50 a. m.]

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[Docket No. G–2445]

OHIO FUEL GAS CO.

ORDER FIXING DATE OF HEARING

This proceeding is a proper one for disposition under the provisions of § 1.32 (b) (18 CFR 1.32 (b)) of the Commission's rules of practice and procedure. Applicant having requested that its application, filed June 1, 1954, pursuant to section 7 of the Natural Gas Act, for authorization to construct and operate certain facilities, as described in said application, for the direct delivery and sale of off-peak industrial gas to the Fenton Construction Company (Fenton) near Urbana, Ohio, or in the alternative, for a Commission order disclaiming jurisdiction with respect to the proposed construction and operation, be heard under the shortened procedure provided by the aforesaid rule for noncontested proceedings, and no request to be heard, protests or petition having been filed subsequent to the giving of due notice of the filing of the application, including publication in the FEDERAL REGISTER on June 18, 1954 (19 F. R. 3634).

The Commission orders:

(A) Pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act, and the Commission's rules of practice and procedure, a hearing be held on August 6, 1954, at 9:30 a. m., e. d. s. t., in a hearing room of the Federal Power Commission, 441 G Street NW., Washington, D. C., concerning the matters involved and the issues presented by the application: *Provided, however,* That the Commission may, after a noncontested hearing, forthwith dispose of the proceeding pursuant to the provisions of § 1.32 (b) of the Commission's rules of practice and procedure.

(B) Interested State Commissions may participate as provided by §§ 1.8 and 1.37 (f) (18 CFR 1.8 and 1.37 (f)) of said rules of practice and procedure.

Adopted: July 14, 1954.

Issued: July 14, 1954.

By the Commission.

[SEAL] LEON M. FUQUAY,
*Secretary.*

[F. R. Doc. 54–5529; Filed, July 19, 1954; 8:51 a. m.]

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[Docket No. G–2455]

HOME GAS CO.

ORDER FIXING DATE OF HEARING

This proceeding is a proper one for disposition under the provisions of § 1.32 (b) (18 CFR 1.32 (b)) of the Commission's rules of practice and procedure, Applicant having requested that its application, filed June 3, 1954, pursuant to section 7 of the Natural Gas Act, for authorization to construct and operate certain facilities, as described in said application, be heard under the shortened procedure provided by the aforesaid rule for noncontested proceedings, and no request to be heard, protests or petition having been filed subsequent to the giving of due notice of the filing of the application, including publication in the FEDERAL REGISTER on June 19, 1954 (19 F. R. 3784–85).

The Commission finds: It is reasonable and in the public interest and good cause exists for fixing the date of hearing in this proceeding less than 15 days after publication of this order in the FEDERAL REGISTER.

The Commission orders:

(A) Pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act, and the Commission's rules of practice and procedure, a hearing be held on August 2, 1954, at 9:30 a. m., e. d. s. t., in a Hearing Room of the Federal Power Commission, 441 G Street NW., Washington, D. C., concerning matters involved and the issues presented by the application: *Provided, however,* That the Commission may, after a noncontested hearing, forthwith dispose of the proceeding pursuant to the provisions of § 1.32 (b) of the Commission's rules of practice and procedure.

(B) Interested State commissions may participate as provided by §§ 1.8 and 1.37 (f) (18 CFR 1.8 and 1.37 (f)) of the said rules of practice and procedure.

Adopted: July 14, 1954.

Issued: July 14, 1954.

By the Commission.

[SEAL] LEON M. FUQUAY,
*Secretary.*

[F. R. Doc. 54–5530; Filed, July 19, 1954; 8:51 a. m.]

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[Docket No. G–2466]

TEXAS GAS TRANSMISSION CORP.

NOTICE OF APPLICATION AND ORDER FIXING DATE OF HEARING

Texas Gas Transmission Corporation (Texas Gas), a Delaware corporation with its principal place of business in Owensboro, Kentucky, filed, on June 24, 1954, an application pursuant to section 7 (c) of the Natural Gas Act for authorization to transport natural gas for Texas Eastern Transmission Corporation (Texas Eastern).

Texas Gas proposes to transport natural gas on an interruptible basis for Texas Eastern from Lisbon, Louisiana, to Lebanon, Ohio, for the period July 1, 1954 to December 31, 1954. The service will be rendered by Texas Gas through its existing 26-inch pipeline and through existing connections with Texas Eastern. Texas Gas proposes a transportation charge of 4.5¢ per Mcf for the service.

Texas Gas requested that it be granted a temporary authorization for the proposed transportation to cover the period prior to issuance of the certificate, if such should issue. Texas Gas also asked that its application be heard under the shortened procedure provided by § 1.32 (b) (18 CFR 1.32 (b)) of the Commission's rules of practice and procedure. The application is on file with the Commission for public inspection.

The Commission finds:

(1) It is appropriate in the public interest in carrying out the provision of the Natural Gas Act, and good cause exists, that due notice of the application including publication in the FEDERAL REGISTER, be given as hereinafter ordered.

(2) It is appropriate in the public interest in carrying out the provisions of the Natural Gas Act, and good cause exists, that the application filed herein on June 24, 1954, should be set down for public hearing as hereinafter provided and ordered.

The Commission orders:

(A) Due notice of this application be given, including publication in the FEDERAL REGISTER, of this notice of application and order.

(B) Pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act, and the Commission's rules of practice and procedure, a hearing be held on August 2, 1954, at 9:30 a. m., e. d. s. t., in a hearing room of the Federal Power Commission, 441 G Street NW., Washington, D. C., concerning the matters involved in and the issues presented by the application: *Provided, however,* That the Commission may, after a non-contested hearing, forthwith dispose of the proceedings pursuant to the provisions of § 1.32 (b) of the Commission's rules of practice and procedure.

(C) Protests or petitions to intervene may be filed with the Commission in accordance with its rules of practice and procedure, §§ 1.8 and 1.10 (18 CFR 1.8 or 1.10) on or before July 29, 1954.

(D) Interested State commissions may participate as provided by §§ 1.8 and 1.37 (f) of the Commission's rules of practice and procedure (18 CFR 1.8 and 1.37 (f)).

Adopted: July 14, 1954.

Issued: July 14, 1954.

By the Commission.

[SEAL] LEON M. FUQUAY, *Secretary.*

[F. R. Doc. 54-5531; Filed, July 19, 1954; 8:51 a. m.]

## FEDERAL TRADE COMMISSION

[File No. 21-464]

NURSERY INDUSTRY

NOTICE OF HOLDING OF TRADE PRACTICE CONFERENCE

Notice is hereby given that a trade practice conference for the Nursery Industry has been authorized by the Federal Trade Commission. Three sessions of the conference will be held under Commission auspices at the following designated times and places:

First session—August 11, 1954, commencing at 10 a. m., c. d. t., in the Illinois Room of the Hotel LaSalle, Chicago, Illinois.

Second session—September 14, 1954, commencing at 10 a. m., P. d. t., in the Fairmont Hotel, San Francisco, California.

Third session—September 28, 1954, commencing at 10 a. m., e. s. t., in the Keystone Room of the Statler Hotel, New York City.

An additional session or sessions of the conference may be scheduled if deemed necessary or desirable.

All persons, firms, and corporations engaged in the sale, offering for sale, or distribution of industry products are cordially invited to attend the scheduled sessions and to participate in the conference proceedings.

Products of the industry include all types of trees, shrubs, vines, ornamentals, herbaceous annuals, biennials and perennials, bulbs, corms and tubers, and other kinds of nursery products, whether collected from the wild state, or grown in a commercial nursery, but do not include florist's or greenhouse plants for inside culture or use, annual vegetable plants, or gladiolus bulbs or corms (gladiolus bulbs being covered by existing trade practice rules as promulgated on January 17, 1952).

After the conference, and before final rules are approved by the Commission, a draft of proposed rules in the form deemed by the Commission to be appropriate will be released and a public hearing thereon will be scheduled, affording opportunity to all interested and affected parties to present their views, criticisms, and suggestions regarding the proposed rules.

Issued: July 15, 1954.

By direction of the Commission.

[SEAL] ROBERT M. PARRISH, *Secretary.*

[F. R. Doc. 54-5548; Filed, July 19, 1954; 8:54 a. m.]

## SECURITIES AND EXCHANGE COMMISSION

[File No. 54-188]

EASTERN UTILITIES ASSOCIATES

ORDER EXTENDING TIME FOR FILING REPORTS CONCERNING FEES AND EXPENSES IN CONNECTION WITH PLAN

JULY 13, 1954.

The Commission having by order issued April 14, 1954, required Eastern Utilities Associates ("EUA") to file on or before July 15, 1954, a report or reports containing certain specified information in respect of fees and expenses in connection with the above-entitled and related proceedings; and

EUA, because of unforeseen delays in completing the negotiations requisite to the completion of such report or reports, having requested that the time for the filing of such report or reports be extended to August 9, 1954; and

The Commission deeming it appropriate in the public interest and in the interest of investors, and necessary to the orderly and effective administration of the act, to grant such request;

*It is ordered,* That the time for filing the report or reports required by the order of April 14, 1954, in the above-entitled proceeding be, and it hereby is, extended from July 15, 1954, to August 9, 1954; and that this order shall become effective upon its issuance.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 54-5523; Filed, July 19, 1954; 8:49 a. m.]

[File No. 70-3270]

CONSOLIDATED NATURAL GAS CO.

ORDER AUTHORIZING ISSUANCE AND SALE AT COMPETITIVE BIDDING OF $25,000,000 PRINCIPAL AMOUNT OF DEBENTURES

JULY 14, 1954.

Consolidated Natural Gas Company ("Consolidated"), a registered holding company, has filed a declaration with this Commission pursuant to section 7 of the Public Utility Holding Company Act of 1935 and Rule U-50 thereunder regarding the proposed issuance and sale, pursuant to the competitive bidding requirements of Rule U-50, of $25,000,000 principal amount of __ percent Debentures due 1978.

The Debentures will be issued pursuant to an Indenture to be dated August 1, 1954, between Consolidated and The Hanover Bank, Trustee. The interest rate (which shall be a multiple of ⅛ of 1 percent) and the price to be paid to Consolidated (which shall be not less than 100 percent nor be more than 102.75 percent of the principal amount exclusive of accrued interest) will be fixed by the competitive bidding.

Consolidated anticipates issuing its invitation for bids on or about July 15, 1954, and receiving such bids on or about July 27, 1954.

The proceeds from the sale of the Debentures, along with other cash resources of Consolidated, will be used to redeem, in accordance with their terms and for the consideration specifically designated therein, Consolidated's outstanding $25,000,000 issue of 3⅞ percent Debentures due 1978.

It is represented that no State commission or Federal commission other than this Commission has jurisdiction in respect of the proposed transaction.

Consolidated has submitted estimates of the fees and expenses incurred and to be incurred in connection with the proposed transaction, but the record has not been completed in respect thereof.

Due notice having been given of the filing of the declaration, and a hearing not having been requested of or ordered by the Commission; and the Commission having examined the filing and finding that the applicable provisions of the act and rules promulgated thereunder are satisfied and that no adverse findings are necessary; and the Commission deeming it in the public interest and the interest of investors and consumers that said declaration should be permitted to become effective forthwith:

*It is ordered,* Pursuant to Rule U-23 and the applicable provisions of the act, that said declaration, as amended, be and it hereby is permitted to become effective forthwith, subject to the terms and conditions prescribed in Rule U-24 and Rule U-50.

*It is further ordered,* That jurisdiction be and hereby is reserved in respect of all fees and expenses in connection with the proposed transaction.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 54-5524; Filed, July 19, 1954; 8:49 a. m.]

[File No. 70-3265]

BOSTON FUND, INC.

ORDER PERMITTING INDIRECT ACQUISITION OF STOCK OF PUBLIC UTILITY COMPANY

JULY 14, 1954.

Boston Fund, Inc., has filed an application and an amendment thereto with this Commission pursuont to section 10 of the Public Utility Holding Company Act of 1935 ("act") regarding a proposed transaction which is summarized as follows:

Applicant states that it is an affiliate of Pittsfield Coal Gas Company ("Pittsfield"), by reason of its ownership of 999 shares or 9.9 percent of Pittsfield's outstanding voting securities, and that Pittsfield proposes to acquire from New England Electric System, a registered holding company, all of the outstanding common stock of Berkshire Gas Company ("Berkshire"), a gas utility company (See Holding Company Act Release No. 12511). In its application Boston Fund, Inc., seeks Commission authorization of the indirect acquisition of the above-mentioned common stock of Berkshire.

Due notice having been given of the filing of said application, and a hearing not having been requested of, or ordered by the Commission; and the Commission finding that the applicable provisions of the act and rules thereunder are satisfied and that no adverse findings are necessary; and deeming it appropriate in the public interest and in the interest of investors and consumers that the application, as amended, should be granted, effective forthwith:

*It is ordered,* Pursuant to Rule U-23 and the applicable provisions of the act, that the application, as amended, be, and it hereby is, granted, effective forthwith, subject to the terms and conditions prescribed in Rule U-24.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 54-5526; Filed, July 19, 1954; 8:50 a. m.]

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[File No. 812-882]

INVESTORS DIVERSIFIED SERVICES, INC. ET AL.

NOTICE OF FILING OF APPLICATION FOR ORDER APPROVING CERTAIN CHARGES ON EXCHANGES OF SECURITIES OF OPEN-END INVESTMENT COMPANIES

JULY 14, 1954.

In the matter of Investors Diversified Services, Inc., Investors Selective Fund, Inc., Investors Stock Fund, Inc., Investors Mutual, Inc.; File No. 812-882.

Notice is hereby given that Investors Diversified Services, Inc. ("I. D. S."), Investors Selective Fund, Inc. ("Selective"), Investors Stock Fund, Inc. ("Stock") and Investors Mutual, Inc. ("Mutual"), have jointly filed an application pursuant to section 11 (a) of the Investment Company Act of 1940 ("act") for an order approving transactions involving the transfer of shares of Selective, Stock and Mutual on the basis described below.

I. D. S., a registered face-amount certificate company under the act, was the organizer and promoter of each of the other applicants, and acts as the principal underwriter and the investment manager of each of them. Selective, Stock and Mutual are affiliated companies of I. D. S. and are registered under the act as open-end diversified management companies; and are currently offering to the public their shares of stock. Selective invests its funds primarily in preferred stocks and bonds. The investments of Stock are comprised mainly of common stocks, and the investments of Mutual are comprised of common stocks, preferred stocks and bonds. The sales load charged upon sales of the shares of Selective is 6½ percent of the public offering price; whereas the charge on the shares of the other two Funds is 7½ percent of the public offering price. The sales charge is scaled down for sales involving amounts larger than $15,000.

Shareholders of each of the Funds are accorded the privilege of converting shares of one Fund into any of the other Funds at their respective net asset values without additional sales charges, except that shares of Selective may not be converted into shares of Stock or Mutual within six months of the date of the purchase of the shares of Selective. The reason for the latter restriction is stated to be for the purpose of preventing purchasers of the shares of Selective from immediately converting the same into shares of Stock and Mutual in order to obtain the advantage of the lower sales charge on the shares of Selective.

Applicants state that shareholders of Selective have objected to the restriction because it limits their freedom of action in transferring their shares to the other two Funds for reasons other than the advantage of the lower sales charge. Such other reasons include certain tax advantages and changing economic, market or other conditions.

Applicants now propose to extend to the shareholders of Selective the privilege of transferring their shares into shares of Stock and Mutual at the respective net asset values at any time, except that if such transfer is made within five months of the date of purchase of the shares of Selective, the transferor shall pay to I. D. S. an amount equal to the difference between the sales charge paid on the shares of Selective when purchased and the charge that would have been paid if the same investment had been made in the shares of the Fund to which the shares of Selective are to be transferred.

In support of the proposal the application states that since I. D. S. will receive the entire additional load and no part thereof will be paid or credited to any salesman there will be no incentive to salesmen to solicit transfers, and that no encouragement or advice will be given to make such transfers. It is further stated that transfers between the Funds may be very desirable to shareholders because of their different investment policies and that transfers will be made entirely at the discretion of the shareholders on the basis of their varying investment needs. Additionally, it is urged that, in effect, the shareholders of all three Funds will be on an equal footing.

Section 11 (a) of the act, in pertinent part, makes it unlawful for any registered open-end company or its principal underwriter to make an offer to the holder of a security of such company or of any other open-end company to exchange his security in the same or another such company on any basis other than the relative net asset values of the respective securities to be exchanged, unless the terms of the offer have first been submitted to and approved by the Commission.

Notice is further given that any interested person may, not later than July 23, 1954, at 5:30 p. m., submit to the Commission in writing any facts bearing on the desirability of a hearing on the matter and may request that a hearing be held, such request stating the nature of his interest, the reasons for such request and the matters of fact or law proposed to be contraverted, or he may request that he be notified if the Commission should order a hearing thereon. Any such communication or request should be addressed: Secretary, Securities and Exchange Commission, Washington 25, D. C. At any time after said date, the application may be granted as provided in Rule N-5 of the rules and regulations promulgated under the act.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 54-5525; Filed, July 19, 1954; 8:50 a. m.]

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## INTERSTATE COMMERCE COMMISSION

[4th Sec. Application 29483]

PHOSPHATIC FEED SUPPLEMENTS FROM BONNIE, FLA., TO OFFICIAL, ILLINOIS AND SOUTHWESTERN TERRITORIES

APPLICATION FOR RELIEF

JULY 15, 1954.

The Commission is in receipt of the above-entitled and numbered application for relief from the long-and-short-haul provision of section 4 (1) of the Interstate Commerce Act.

Filed by: R. E. Boyle, Jr., Agent, for carriers parties to schedule listed below.

Commodities involved: Phosphatic feed supplements, viz.: superphosphate, defluorinated and phosphate, di-calcium, feed grade, carloads.

From: Bonnie, Fla.

To: Points in official, Illinois and southwestern territories.

Grounds for relief: Rail competition, circuity, rates constructed on the basis of the short line distance formula, and additional origin.

Schedules filed containing proposed rates: C. A. Spaninger, Agent, I. C. C. No. 1434.

Any interested person desiring the Commission to hold a hearing upon such application shall request the Commission in writing so to do within 15 days from the date of this notice. As provided by the general rules of practice of the Commission, Rule 73, persons other

than applicants should fairly disclose their interest, and the position they intend to take at the hearing with respect to the application. Otherwise the Commission, in its discretion, may proceed to investigate and determine the matters involved in such application without further or formal hearing. If because of an emergency a grant of temporary relief is found to be necessary before the expiration of the 15-day period, a hearing, upon a request filed within that period, may be held subsequently.

By the Commission.

[SEAL] GEORGE W. LAIRD,
*Secretary.*

[F. R. Doc. 54-5514; Filed, July 19, 1954; 8:48 a. m.]

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[4th Sec. Application 29484]

PHOSPHATIC FEED SUPPLEMENTS FROM SOUTHERN POINTS TO WESTERN TRUNK LINE TERRITORY

APPLICATION FOR RELIEF

JULY 15, 1954.

The Commission is in receipt of the above-entitled and numbered application for relief from the long-and-short-haul provision of section 4 (1) of the Interstate Commerce Act.

Filed by: R. E. Boyle, Jr., Agent, for carriers parties to schedule listed below.

Commodities involved: Phosphatic feed supplements, viz.: phosphate, defluorinated, superphosphate, defluorinated, and phosphate, di-calcium, feed grades, carloads.

From: Bonnie and Cornet, Fla., Godwin, Mt. Pleasant, Nashville, and Wales, Tenn., Sheffield, Ala., and Tupelo, Miss.

To: Points in western trunk-line territory.

Grounds for relief: Rail competition, circuity, and rates constructed on the basis of the short line distance formula.

Schedules filed containing proposed rates: C. A. Spaninger, Agent, I. C. C. No. 1434.

Any interested person desiring the Commission to hold a hearing upon such application shall request the Commission in writing so to do within 15 days from the date of this notice. As provided by the general rules of practice of the Commission, Rule 73, persons other than applicants should fairly disclose their interest, and the position they intend to take at the hearing with respect to the application. Otherwise the Commission, in its discretion, may proceed to investigate and determine the matters involved in such application without further or formal hearing. If because of an emergency a grant of temporary relief is found to be necessary before the expiration of the 15-day period, a hearing, upon a request filed within that period, may be held subsequently.

By the Commission.

[SEAL] GEORGE W. LAIRD,
*Secretary.*

[F. R. Doc. 54-5515; Filed, July 19, 1954; 8:48 a. m.]

# DEPARTMENT OF JUSTICE

## Immigration and Naturalization Service

DEPUTY DISTRICT DIRECTORS

DELEGATION OF FINAL AUTHORITY

The following amendment to the Statement of Organization of the Immigration and Naturalization Service (17 F. R. 11613, December 19, 1952), as amended, is prescribed:

Section 1.38 *Final authority; delegation to deputy district directors and district enforcement officers* is amended by deleting from the headnote and the introductory material the words "and district enforcement officers".

Dated: July 9, 1954.

HERBERT BROWNELL, Jr.,
*Attorney General.*

Recommended: June 4, 1954.

J. M. SWING,
*Commissioner of Immigration and Naturalization.*

[F. R. Doc. 54-5511; Filed, July 19, 1954; 8:47 a. m.]

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## Office of Alien Property

WODAN HANDELMAATSCHAPPIJ, N. V.

NOTICE OF INTENTION TO RETURN VESTED PROPERTY

Pursuant to section 32 (f) of the Trading With the Enemy Act, as amended, notice is hereby given of intention to return, on or after 30 days from the date of publication hereof, the following property, subject to any increase or decrease resulting from the administration thereof prior to return, and after adequate provision for taxes and conservatory expenses:

*Claimant, Claim No., Property, and Location*

Wodan Handelmaatschappij, N. V., Rotterdam, Holland, Claim No. 62013, Vesting Order No. 17982; $43,360.13 in the Treasury of the United States.

Executed at Washington, D. C., on July 14, 1954.

For the Attorney General.

[SEAL] DALLAS S. TOWNSEND,
*Assistant Attorney General, Director, Office of Alien Property.*

[F. R. Doc. 54-5537; Filed, July 19, 1954; 8:52 a. m.]

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JACOB AND KOENRAAD SUIJK

NOTICE OF INTENTION TO RETURN VESTED PROPERTY

Pursuant to section 32 (f) of the Trading With the Enemy Act, as amended, notice is hereby given of intention to return, on or after 30 days from the date of publication hereof, the following property located in Washington, D. C., including all royalties accrued thereunder and all damages and profits recoverable for past infringement thereof, after adequate provision for taxes and conservatory expenses:

*Claimant, Claim No., and Property*

Jacob Suijk, Heemsteedsche Dreef 174, Heemstede, The Netherlands, Claim No. 41866; Koenraad Suijk, Heemsteedsche Dreef 172, Heemstede, The Netherlands, Claim No. 41867; property described in Vesting Order No. 671 (8 F. R. 5004, April 17, 1943) relating to United States Letters Patent No. 2,282,501; an undivided one-half part thereof to each claimant.

Executed at Washington, D. C., on July 14, 1954.

For the Attorney General.

[SEAL] DALLAS S. TOWNSEND,
*Assistant Attorney General, Director, Office of Alien Property.*

[F. R. Doc. 54-5536; Filed, July 19, 1954; 8:51 a. m.]

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[Vesting Order 19281, as Amended; Amdt.]

LOUISE BARBARA RICHTER KEHL ET AL.

In re: Interest in real property owned by Louise Barbara Richter Kehl and others. D 28-13133.

Vesting Order 19281, dated April 14, 1953, as amended, is hereby further amended as follows and not otherwise:

By deleting subparagraph 2-a as set forth in Vesting Order 19281 and substituting therefor the following:

a. An undivided eleven-twentieths (11/20ths) interest in certain real property situated in the City of Margate, County of Atlantic, State of New Jersey, particularly described as Lot Seven (7) and Lot Twelve (12), in Block 304B, on Map of Margate City, New Jersey, by W. I. Risley, C. E. and Surveyor, revised March 1926, filed November 8, 1945, File #1023, together with all hereditaments, fixtures, improvements and appurtenances thereto, and any and all claims for rents, refunds, benefits or other payments arising from the ownership of such property, and

All other provisions of said Vesting Order 19281, as amended, and all actions taken by or on behalf of the Attorney General of the United States in reliance thereon, pursuant thereto and under the authority thereof are hereby ratified and confirmed.

Executed at Washington, D. C., on July 14, 1954.

For the Attorney General.

[SEAL] DALLAS S. TOWNSEND,
*Assistant Attorney General, Director, Office of Alien Property.*

[F. R. Doc. 54-5538; Filed, July 19, 1954; 8:52 a. m.]